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# ANNUAL REPORT

*1954*

*Chicago Natural History Museum*















Fabian Bachrach

ALBERT B. DICK, JR.

1894-1954

Member of the Board of Trustees since 1936

A Vice-President of the Museum from 1942 to 1951

Member of the Executive Committee and Finance Committee

CHICAGO NATURAL HISTORY MUSEUM

# Report of the Director

*to the*

## Board of Trustees

*for the year 1954*



CHICAGO, ILLINOIS  
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\* resigned

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\* resigned



CHICAGO NATURAL HISTORY MUSEUM  
FORMERLY FIELD MUSEUM OF NATURAL HISTORY  
ROOSEVELT ROAD AND LAKE SHORE DRIVE



# Annual Report

*of the Director*

To the Trustees:

I have the honor to present a report of the operation of the Museum for the year ending December 31, 1954.

From an operating standpoint, this year presented extreme difficulties because of the shortage of available income. The relief voted by the Commissioners of the Chicago Park District in December of 1953 will not be effective until 1955. Similarly, the increase in funds for the Museum voted in December of 1954 will not be forthcoming until 1956. Without the understanding interest and co-operation of the Chicago Park District Commissioners, the program of this Museum would have been seriously curtailed. I am grateful to them and to the members of their staff who helped us solve an extremely difficult problem.

Salary increases for members of the scientific staff were made effective in January in the realization that the scientific staff had been severely penalized by inflation. Realizing the difficult situation created by the necessary increases, they gave maximum co-operation in the reduction of other expenditures and in the unavoidable restriction or omission of some activities.

Among noteworthy undertakings in our four scientific departments during the year is the systematic ecological study in the Department of Geology of Pennsylvanian (Coal Age) shales from the vicinity of Mecca, Indiana. An outcropping of fossil-bearing



shales at that locality permitted the study of faunal relationships as indicated in the fossils that were found there. Determination of the nature of sedimentation and detailed study of the fauna itself are also important parts of the work. Methodically a total of one hundred and eighty square feet of shale some fourteen inches in thickness was brought to the Museum and reassembled for complete analysis and systematic charting of the occurrence of all fossil materials. The project is well under way (see page 49), but, because of its size, importance, and the meticulous care that must be exercised, completion will not be recorded for some time to come.

## TRUSTEES AND OFFICERS

Members of the Board of Trustees were saddened by the death of their fellow member, Albert B. Dick, Jr. In his memory they adopted the following resolution at their meeting in November:

ALBERT B. DICK, JR.

1894-1954

"The death on October 24, 1954, of Albert B. Dick, Jr., was noted with deep regret and a sense of personal loss by the members of the Board of Trustees of Chicago Natural History Museum.

"Mr. Dick first became a member of the Museum in August of 1924, and had been continuously associated with it since that time. He was elected a member of the Board of Trustees on December 21, 1936, and served as a Vice-President from January of 1942 until May of 1951.

"Mr. Dick did not take lightly his duties as a member of the Board, but at all times displayed keen interest in its operation and aided substantially in its program. For many years he served as a member of the Museum's two most active Committees: the Finance Committee and the Executive Committee. In addition, he contributed funds from time to time for projects of the Museum that required special financing.

"Not only the Museum, but many other civic and charitable enterprises profited by his interest and generosity. He was a member of the board of the Lake Forest Hospital and of the Presbyterian Hospital of Chicago, in whose behalf he became chairman of a special building-fund drive. He had also served his residential community as mayor of Lake Forest.

"In the business community he was well known as an able and progressive executive with an outstanding interest in the welfare of his employees. He was Chairman of the Board of the A. B. Dick Company and served also on the boards of the Commonwealth Edison Company, Marshall Field and Company, the Northern Trust Company, and the First National Bank of Lake Forest.

"Among his associates he was honored as a man of force and character, farsighted in his business judgments and alert always to the problems and needs of persons in less favorable circumstances. His unfailing good humor, which was so characteristic of him, lightened many a serious situation and often helped in reaching a better understanding of difficult problems. We of the Board of Trustees feel deeply the loss of his fine personal friendship.

"Therefore, be it resolved that this expression of our sorrow at his death be permanently inscribed on the records of this Museum. And be it further resolved that our deep sympathy be conveyed to the members of his family in their bereavement and that a copy of this resolution be sent to his widow."

#### OFFICERS, 1954

At the annual meeting of the Board of Trustees, Stanley Field was elected president to serve for his forty-sixth consecutive year. Samuel Insull, Jr., was advanced from third to second vice-president and Joseph N. Field was elected third vice-president. Other officers re-elected are: Marshall Field, first vice-president; Solomon A. Smith, treasurer; Clifford C. Gregg, secretary; and John R. Millar, assistant secretary.

#### GIFT TO THE MUSEUM

I am particularly pleased to report the action taken by members of the Board of Trustees as individuals in contributing the sum of \$10,400 for the purchase and installation of a specimen of the dinosaur *Gorgosaurus libratus* (see page 30). This extremely desirable specimen was made available to the Museum at a time when the budget of the Museum could not accomplish its purchase. The action of the Board members in devoting their personal funds to this important acquisition has clearly demonstrated their abiding interest in the program of this institution to which they have devoted so much of their time. Their action has meant much to the morale of staff members, who see in this action more than the usual support to be expected of members of the official Board.

JAMES NELSON AND ANNA LOUISE RAYMOND  
FOUNDATION FOR PUBLIC SCHOOL AND  
CHILDREN'S LECTURES

The staff of seven lecturers that comprises this educational division of the Museum carried on the programs, tours, and lectures that have been established as needed throughout the years. In addition to the constant study that is necessary to prepare for these programs, the staff has been making a careful survey of the organized groups that come to the Museum in order to determine their interests and needs so that we can be more helpful to them. This survey has led into a study of the different curricula of the schools in Chicago and suburbs with the resulting development of a number of specific lectures and programs offered to specific schools and grades at specific times. Information is sent out in advance to the teacher, with suggestions for planning her trip to the Museum and possible follow-up work. Ten of these specific school-programs offered in 1954 were presented a total of 41 times with a total attendance of 5,206 children.

Programs continued with organized groups besides school groups, such as Girl Scouts, Boy Scouts, camp groups, park organizations, and neighborhood groups. Fourteen programs for Girl Scouts were offered to help with their nature-badge work and 1,339 attended. In my report last year, I referred to our co-operative effort with the Chicago Girl Scout organization. It is with sincere pleasure that I now record the continuation of co-operation with this splendid organization. Girl Scout Museum Aides assisted with the various programs offered to Girl Scouts and also were helpful in handling the children's groups that attended the Saturday-morning educational programs. A selected group of twenty-five Senior Girl Scouts was given a two-day training course about the Museum, covering its history, development, purposes, research work, educational programs, and other pertinent information. Thus the Museum story will be told in many home communities—in schools and in neighborhood organizations and Girl Scout troops—by these young leaders who were especially selected for that service. In addition, six Girl Scouts from Downers Grove, Illinois, worked on a special project of plant-mounting in the Museum herbarium (see page 46). Their work assists in the necessary preparation for study of plant material, and their services are greatly appreciated.

For individuals and groups, Raymond Foundation presented its regular motion-picture programs on Saturday mornings in March, April, October, and November and on six Thursday mornings in



The opening in this totem pole is pictured as an animal's mouth and served as the entrance to a house. Miss Miriam Wood, Chief of Raymond Foundation, explains the totem pole to children from Orchard Hill Farm Kindergarten, Tinley Park.

July and August (heavy attendance in the summer necessitated a repeat showing for each program). A total of 23,353 attended these 29 programs. Many individual Brownie Scouts participated in the games and "treasure quests" worked out for them in connection with the Saturday programs (15 games and "treasure quests" were prepared for 2,259 Brownie Scouts). In addition to these, two "expeditions" were worked out for the Brownies, "African Expedition" and "Expedition Backyard," which required troop participation at the Museum program, study in the halls, reports from suggested readings, and at least one follow-up project (596 Brownies in 37 troops registered for these "expeditions" and 11 troops completed requirements and received certificates from the Museum).

Two series of Museum Stories, "Small Living Things" and "Spices," were published and distributed free to children who attended the Saturday-morning programs. Extension-lecture service to the Chicago public and private schools continued, with the addition of one new lecture, "The Story of a Museum Exhibit—Marsh Birds of the Upper Nile."

The ultimate goal of all these activities is to help interpret the Museum exhibits to the public and to help make the Museum a more useful part of this city and region. A summary of all activities of Raymond Foundation for the year follows:

#### RAYMOND FOUNDATION ACTIVITIES

##### ACTIVITIES WITHIN THE MUSEUM

For children	Groups	Attendance	Groups	Attendance
Tours in Museum halls.....	1,096	40,916		
Lectures preceding tours....	275	13,967		
Motion-picture programs...	29	23,353		
	<hr/>	<hr/>		
TOTAL.....			1,400	78,236
For adults				
Tours in Museum halls.....	370	6,409		
Lectures preceding tours....	13	514		
	<hr/>	<hr/>		
TOTAL.....			383	6,923

##### EXTENSION ACTIVITIES

Chicago Public Schools				
Elementary .....	70	20,835		
	<hr/>			
TOTAL.....			70	20,835
			<hr/>	<hr/>
TOTAL FOR RAYMOND FOUNDATION ACTIVITIES.....			1,853	105,994



## LECTURE PROGRAMS FOR ADULTS

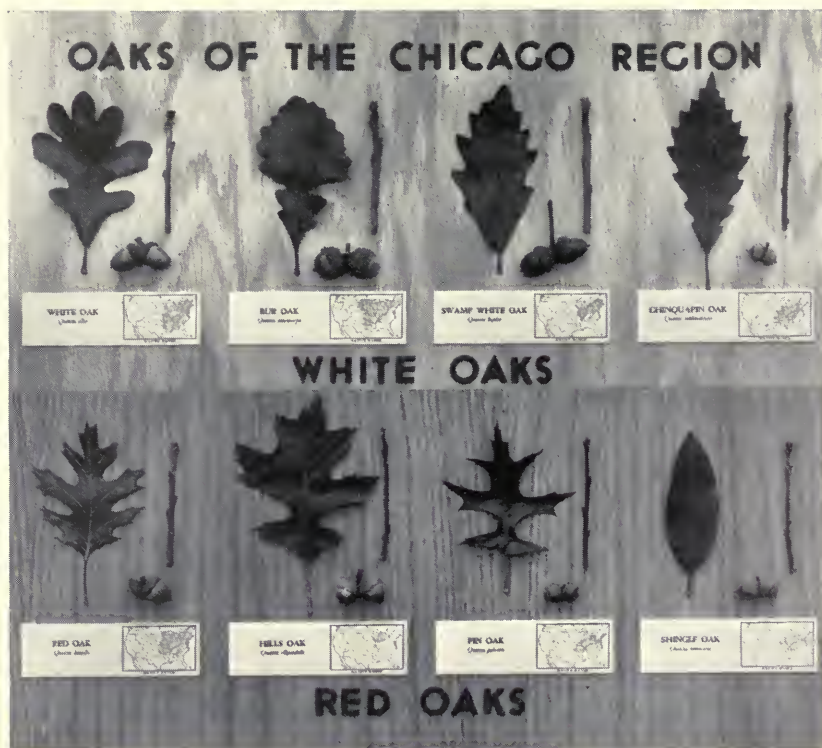
Under the provisions of the Edward E. Ayer Lecture Foundation Fund the Museum presented in 1954 its 101st and 102nd series of lectures for adults. These lectures have been given for many years on Saturday afternoons during March, April, October, and November. The 1954 attendance of 16,516 exceeded by some 400 the total attendance during the previous year. It is well to note that the continuation of these lecture courses, presented without charge to the adult public, is the result of the foresight and generosity of the late Edward E. Ayer, President of the Museum from 1894 to 1898 and a Trustee from 1893 to 1927, whose benefactions included not only his lecture foundation fund but also a library on ornithology, a library fund, and many important collections of specimens.

## THE LAYMAN LECTURER

During the earlier part of the year Paul G. Dallwig, the Layman Lecturer, presented his 14th series of Sunday-afternoon lectures. Total attendance during the five months amounted to 4,043. Many inquiries were received late in the year about Mr. Dallwig's next series of lectures. Unfortunately it was necessary to reply that pressure of business and other lecture engagements had prompted Mr. Dallwig to omit his lectures at the Museum during 1955, with the expectation of resuming the series in 1956. Again I take this opportunity to record the thanks of the Museum to Mr. Dallwig for his popular and unusual contribution to the Museum.

## SPECIAL EXHIBITS

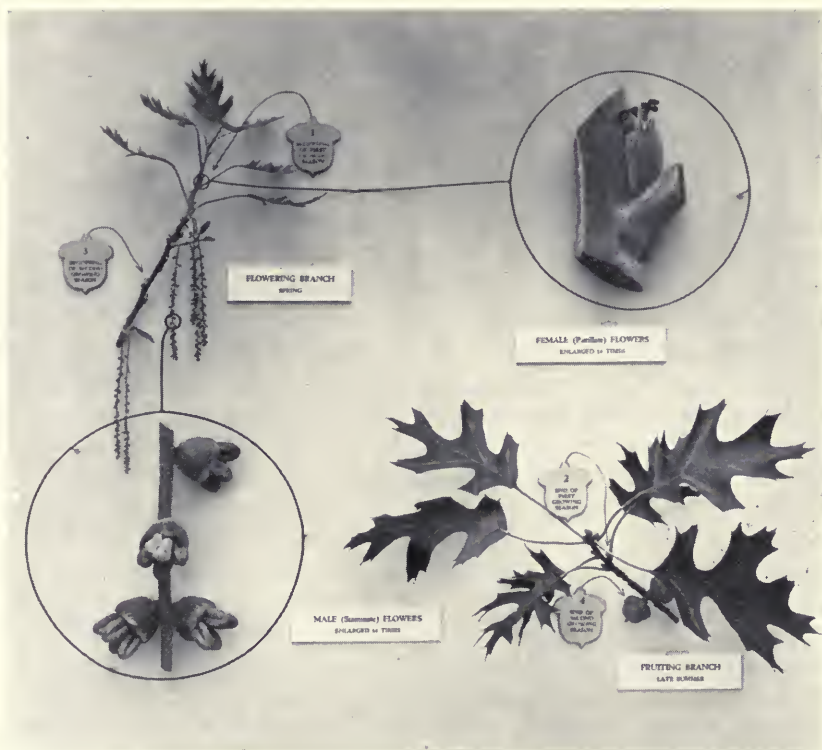
Two exhibits prepared especially for Members' Night, "In Search of History" and "The 'Why' of Museum Insect Collections" (see pages 29 and 64), were displayed in Stanley Field Hall through October and November. "Indians of the Western Frontier," a selection from the paintings by George Catlin in the Museum's collection, was a special exhibit during April. Other special exhibits during the year were the Fourth Annual Amateur Handcrafted Gem and Jewelry Competitive Exhibition, Ninth Chicago International Exhibition of Nature Photography, drawings by students in the Junior School and Day School of the Art Institute of Chicago, and notebooks prepared by Brownie troops after an "Expedition to Africa" in the Museum (see page 24).



Installed as a portable exhibit and labeled for identification, oak leaves and acorns help school children learn to know the oaks common in and near Chicago.

### THE N. W. HARRIS PUBLIC SCHOOL EXTENSION

At the close of the year 519 public schools and other approved institutions in Chicago were receiving the portable Museum exhibits prepared and distributed by the Department of the N. W. Harris Public School Extension. As in past years, the exhibits were circulated routinely only during the months when school was in session. Each borrower received a total of thirty-four exhibits. Forty-three requests for selected exhibits and for such study-kit material as birdskins and rock and insect collections were filled during the year. The department does not make special loans only to members of institutions regularly receiving the portable Museum exhibits—anyone who demonstrates a need for specific material and assures its safe return is an eligible borrower.



Plant-reproduction exhibit showing the flowers and growing acorns of the black oak (a member of the red-oak group) supplements the oak-identification exhibit.

Damage to exhibits circulated by the department was rather heavy. Vandals in two schools completely destroyed an exhibit of Eskimo toys and a habitat-mounting of the jack rabbit. Repairable damage was done to another thirty-two exhibits in circulation. Two cases (an industrial study of salt and a habitat group of the American bison in miniature) were stolen from a public school.

In the Museum workshops the department completed thirteen new exhibits and installed them in portable cases. Seven are of common fresh-water fishes of lakes and streams in the Chicago area. The other six show flowering and fruiting branches of the black oak. Repairs necessary to keep exhibits in satisfactory condition for circulation were made on 345 cases. Several brief excursions to local lakes and woods were taken in order to collect plant and animal specimens essential to exhibits under preparation.



## STAFF OF THE MUSEUM

Evelt D. Hester, who for many years was Economic Adviser to the High Commissioner of the Philippine Islands and now is a research associate in the department of anthropology of the University of Chicago, is the first to be awarded the Museum's recently established Thomas J. Dee Fellowship (see Annual Report, 1953, page 29). Clifford H. Pope, Curator of Amphibians and Reptiles for thirteen years, who resigned on December 31, 1953, was elected Research Associate in the Division of Amphibians and Reptiles by the Board of Trustees. Dr. Margery C. Carlson, Associate Professor of Botany at Northwestern University, was appointed Associate in Botany, and Karl Plath, of Chicago Zoological Society, Brookfield, was appointed Associate in the Division of Birds. Other appointments during the year were: Dr. Robert L. Fleming, Dr. Frederick J. Medem, and Dr. Georg Haas, Field Associates, Department of Zoology; Roger T. Grange, and Whitney Halstead, Assistants, Department of Anthropology; Robert A. Krueger, Assistant Auditor; Miss Betty Lou Lesk, Secretary, Department of Zoology; Miss Pearl Sonoda, Assistant, Division of Fishes; Miss Edith M. Vincent, Research Librarian, Department of Botany; Miss Jane Rockwell, Assistant, Public Relations; and, to the Library staff, Mrs. Maryl André, Dr. Hoshien Tchen, Miss Marjorie A. West, and Miss Katharine Williams.

Dr. Robert F. Inger, Assistant Curator of Fishes, was made Curator of Amphibians and Reptiles; Dr. John W. Thieret, Assistant Curator of Economic Botany, was promoted to Curator; Philip Hershkovitz, Assistant Curator of Mammals, was promoted to Associate Curator; and the title of George I. Quimby, Curator of Exhibits in Anthropology, was changed to Curator of North American Archaeology and Ethnology. Leon L. Walters, Taxidermist, retired on March 31 after forty-three years on the staff of the Museum. Resignations during the year were: Miss Margaret J. Bauer, Secretary, Department of Zoology; Celestino Kalinowski, Assistant Taxidermist; Mrs. Barbara Polikoff, Associate Public Relations Counsel; Mrs. Priscilla F. Turnbull, Assistant, Division of Fossil Vertebrates; Frank C. Wonder, Taxidermist; and, in the Library, Mrs. Nancy R. Peters, Mrs. Audrey Greeley Rhine, and Miss Jane F. Ross.

With regret I record the death on June 15 of Frank F. Gottsch, a guard since 1944, and the death on August 18 of Valerie Legault, who from 1906 until his retirement on pension in 1940 was employed first in the Division of Maintenance and later in the N. W. Harris Public School Extension and in the Department of Geology.

## MEMBERSHIP

It is gratifying to report a substantial increase in the number of Museum Members for 1954. During the year 866 new Members were enrolled, although a loss of 394 Members was incurred through death, transfer, and cancellation. The total number of Members at the close of the year was 5,280. The number in each membership classification was as follows: *Benefactors*—25; *Honorary Members*—9; *Patrons*—15; *Corresponding Members*—6; *Contributors*—194; *Corporate Members*—39; *Life Members*—131; *Non-Resident Life Members*—25; *Associate Members*—2,172; *Non-Resident Associate Members*—12; *Sustaining Members*—23; *Annual Members*—2,629. The names of all Members of the Museum during 1954 are listed at the end of this Report under the various classes of membership.

## MEMBERS' NIGHT

On the evening of Friday, October 8, the Museum held its fourth annual Members' Night, an occasion that permits the Board of Trustees, the Director, and the staff of the Museum to express their appreciation to our Members for their loyal support. Over the years our Members have provided endowment funds exceeding \$630,000, and their contribution to operating funds through the payment of annual membership dues during 1954 exceeded \$25,000.

In addition to opening the laboratories and workrooms of the Museum to our visitors, there were on Members' Night two outstanding special events. Walther Buchen, a Trustee of the Museum, presented in the James Simpson Theatre the film record of the new habitat group, "Marsh Birds of the Upper Nile," showing not only the expedition conducted by Mr. and Mrs. Buchen but also the subsequent preparation of the specimens and the installation of the group itself. At the close of the lecture many of the Members inspected the new exhibit, where Mr. Buchen graciously answered specific questions and gave additional information. The other special event was the unveiling by Rush Watkins, a Museum Contributor, of the group of Malay tapirs that had been collected by a Museum expedition under his leadership. In Stanley Field Hall were two special exhibits, "In Search of History," which showed the methods used by our anthropologists in their work in the Southwest, and "The 'Why' of Museum Insect Collections" (see page 64). More than a thousand Members turned out on this evening, and from appearances everyone had an enjoyable and instructive time.

## GIFTS TO THE MUSEUM

A gift of \$1,004.04 was received by the Museum from Harry Vearn Clyborne, of Lemont, Illinois, for the purpose of establishing the Harry Vearn and Mary Elizabeth Clyborne Fund, to which Mrs. Mary Elizabeth Clyborne subsequently added \$100. Dr. Maurice L. Richardson, Lansing, Michigan, added \$1,750 to the Maurice L. Richardson Paleontological Fund; C. Suydam Cutting, New York, added \$750 to the C. Suydam Cutting Fund; Miss Margaret B. Conover, Chicago, added \$664 to the Conover Game-Bird Fund, which was established by her brother, the late Boardman Conover, a Trustee of the Museum and Research Associate in the Division of Birds; and James R. Getz, Lake Forest, Illinois, gave \$400 for the Lower Mississippi Valley Archaeological Field Trip, 1954 (see page 37). Stanley Field, President of the Museum, gave an additional \$20,000 for the endowment of the Museum; Mrs. Stanley Field, a Benefactor of the Museum, added \$10,000 to the Sara Carroll Field Fund; Walther Buchen, Trustee, added \$833.38 to the Walther Buchen Zoological Expedition Fund; and \$423.98 was received from the estate of the late Mrs. Abby K. Babcock.

Members of the Board of Trustees contributed a total of \$10,400 for the purchase and installation of a specimen of the dinosaur *Gorgosaurus libratus* (see pages 21 and 54). Gifts of money in memory of the late Albert B. Dick, Jr., Trustee of the Museum, were made by Mr. and Mrs. Wm. McCormick Blair and Samuel Insull, Jr. Funds for support of research in Chinese ethnology were contributed by Byron Harvey III, Harvey Fund (Santa Barbara, California), Mrs. Salmon O. Levinson, Miss Lillian A. Ross, and an anonymous donor. Other gifts of money were received from George A. Bates, Wm. McCormick Blair, W. S. Bodman, Peder A. Christensen, Dr. Paul S. Martin, National Society of Colonial Dames of America (Illinois), Joseph H. Optner, Langdon Pearse, John P. Ramsey, Clarence B. Randall, Philip S. Rinaldo, Jr., Mrs. William M. Scudder, Edgar J. Shoen, Edward Shull, Raymond M. Siddes, Mrs. Ellen T. Smith, and Dr. Robert H. Whitfield.

Those giving \$1,000 to \$100,000 in money or materials are elected Contributors by the Board of Trustees (see page 105 for names of Contributors). Contributors elected in 1954 are: Harry Vearn Clyborne (in recognition of gift listed above); Marshall Field, Jr., John G. Searle, John P. Wilson, and the late Albert B. Dick, Jr., Trustees of the Museum (in recognition of their generous contributions to the funds of the Museum); Dr. Robert L. Fleming, Mussoorie, India (gift of zoological specimens); William J. Gerhard,



Using a bird-of-paradise as an example, Dr. Austin L. Rand, Curator of Birds, shows Senior Girl Scouts how birdskins of the type used in research are filed in labeled drawers and placed in dust-and-light-proof steel cases (see page 22).

Curator Emeritus, Division of Insects (gift of a collection of North American and exotic Hemiptera and of books pertaining to Hemiptera); Evett D. Hester, Chicago (gift of Chinese ceramics from the Philippine Islands); Arthur L. McElhose, posthumously elected (gift of a collection of North American butterflies and moths); Henry C. Schwab, posthumously elected (gift of Chinese porcelains); and Mrs. Ellen T. Smith, Associate, Division of Birds (in recognition of generous gifts to the Museum over a period of several years).

The Museum thanks its faithful volunteer workers for their help during the year. Some of them, designated as Research Associates and Associates, are included in the List of Staff at the beginning of this Report. Other volunteers are: Miss Maryanne Atherton, Mrs. Marilyn Corcoran, Tom Dolan, Richard Duffey, Miss Beatrice Dvorak, William Ellis, Miss Ruth Griswold, Robert Imhoff, Richard McClung, Harry G. Nelson, Donald Oemich, Richard Seltin, Floyd A. Swink, George Williams, and Philip Young.



## THE BOOK SHOP

Sales amounting to \$84,600 during 1954, a gain of \$10,000 over the preceding year, set a new record in annual sales for The Book Shop of the Museum. The increase of more than 65 per cent of sales by mail included therein is testimony to the growing interest of Museum Members and others in authoritative books on natural history. Of particular interest to our patrons was a series of sixty Stori-views of the Museum's habitat-groups of mammals (Stori-views are stereo-slides, with descriptive text, for use in an accompanying viewer). Also available are standard 35mm color-transparencies of the same subjects. Thus, for the first time, it is possible for anyone, regardless of inability to visit the Museum, to study and enjoy the exhibits.

## ATTENDANCE

During the year 1,142,200 people were recorded as visitors to the Museum. The figure represents a drop of approximately 62,000 under the preceding year. An unusual pattern of attendance is now readily recognizable: attendance during the week is increasing and heavy losses come on Sundays. For this, the difficulty of getting to the Museum on Sundays is directly responsible. Rigid curtailment of service by the Chicago Transit Authority has made it extremely difficult for many people to reach the Museum, and the efforts of visitors to come by private transportation has resulted in filling the available parking space to capacity often before noon on Sundays. Transportation is an item not within the scope of the Museum management, and representation to other authorities has not produced results. The increasing attendance during the week is emphasized by the fact that paid admissions increased by \$1,056.25, while the drop in free attendance primarily on Sundays not only offsets the gain of 4,225 paying visitors but brought about the considerably reduced attendance for the year. The effect of our transportation difficulties is even further emphasized by the fact that in June, July, and August, the vacation months in which out-of-town visitors make up the bulk of our attendance, the increase in total attendance amounted to 23,000 persons. The Museum continues to be one of the important attractions for the boys and girls who attend the National Congress of 4-H Clubs, held early in December, and school groups from many surrounding states continue to visit the Museum each spring. The constant improvement of the exhibits encourages visits by many groups year after year.

## CAFETERIA OF THE MUSEUM

During the year 323,088 people were served in the cafeteria and lunchroom. This figure is about 1,400 less than the number for the previous year, although total receipts increased by almost \$10,000. The use of automatic vending-machines during the hours when the cafeteria and lunchroom are not open was primarily responsible for the increase in receipts in the year.

## MUSEUM EXPEDITIONS

The Museum conducted sixteen expeditions and field trips in 1954, described in this Report under headings of the scientific departments. Expeditions and field trips of 1954 and their leaders are:

DEPARTMENT OF ANTHROPOLOGY—*Lower Mississippi Valley Archaeological Field Trip* (George I. Quimby, Curator of North American Archaeology and Ethnology); *Southwest Archaeological Expedition* (Dr. Paul S. Martin, Chief Curator of Anthropology)

DEPARTMENT OF BOTANY—*Cuba Botanical Field Trip* (Dr. B. E. Dahlgren, Curator Emeritus of Botany); *Venezuela Botanical Expedition in Collaboration with New York Botanical Garden, 1954-55* (Dr. Julian A. Steyermark, Curator of the Phanerogamic Herbarium)

DEPARTMENT OF GEOLOGY—*El Salvador Field Trip* (Dr. Sharat K. Roy, Chief Curator of Geology); *Indiana Paleontological Field Work* (Dr. Rainer Zangerl, Curator of Fossil Reptiles); *Lake Superior Geological Field Trip* (Robert K. Wyant, Curator of Economic Geology); *Texas Paleontological Expedition* (Bryan Patterson, Curator of Fossil Mammals)

DEPARTMENT OF ZOOLOGY—*Conover Angola Expedition* (Gerd H. Heinrich); *Louisiana Zoological Field Trip* (Henry S. Dybas, Associate Curator of Insects); *Mexico Zoological Field Trip, 1954-55* (Loren P. Woods, Curator of Fishes); *Pacific States Zoological Field Trip* (Rupert L. Wenzel, Curator of Insects); *Palestine Zoological Expedition* (Dr. Fritz Haas, Curator of Lower Invertebrates); *Peru Zoological Expedition, 1953-54* (Celestino Kalinowski, Assistant Taxidermist); *Philippines Study Trip, 1953-54* (Dr. Austin L. Rand, Curator of Birds); *United States Naval Medical Research Unit No. 3, Cairo, Egypt, 1949—* (Field Associate Harry Hoogstraal)

# Department of Anthropology

## Research and Expeditions

Two of the principal goals of archaeological research are (1) the reconstruction of the history of a particular culture or civilization and (2) the search for cultural laws that govern the rise and fall of cultures or civilizations. During the past eleven years, the members of the Southwest Archaeological Expedition under the leadership of Dr. Paul S. Martin, Chief Curator of Anthropology, assisted by Dr. John B. Rinaldo, Assistant Curator of Archaeology, have been trying to achieve these goals, in part at least.

One of the generalizations that has already resulted from the long-term program in the Southwest is called the "Southwest Co-tradition" and postulates that the geographical entity of the Southwest is also a cultural whole, over which washed certain currents of fashion, now ebbing, now flowing. These "fashions" or cultural changes were not accepted in their original forms but were changed according to a little-understood system of dynamics peculiar to each subculture. Thus all the subcultures got the idea of pottery-making probably from a single source but re-used the idea in unique ways. The potteries, then, of the various subcultures are distinct and unique. This postulate has not been commonly accepted, but the authors, Martin and Rinaldo, think the idea has merit. They have noted also that certain causes produced certain effects (i.e., the introduction of agriculture produced a greater population, larger houses and villages, and more towns). Their researches therefore attempt to isolate the important and primary features of the Mogollon culture from the secondary or flavorful ones in order to understand the earliest stages in the rise of a civilization.

During the summer of 1954 a monumentally large ceremonial room or kiva, a pit-house kiva, and fourteen surface dwelling-rooms were excavated, all of them erected about A.D. 1200, shortly before the Mogollon Indians moved to other areas. The large ceremonial room was roughly 30 feet by 40 feet, or almost large enough for two badminton courts, side by side. The floor was seven feet below the surface. There was not the usual hatchway in the roof or small doorway, such as the Indians crawled through in going from room to room in their homes, but a stately entrance, the floor of which was a ramp that was half as long as a bowling alley and wide enough for six people to march abreast. It took the archaeologists about six weeks with a crew of seven men to dig out the kiva.



This pottery, which was excavated from Apache Creek Pueblo, western New Mexico, by our Southwest Archaeological Expedition in 1954, is dated at about A.D. 1250.

The excavations yielded a few thousand sherds, architectural details, two painted ceremonial(?) stones, and an earlier smaller kiva, also subterranean, that had been built perhaps fifty years before the larger one, with masonry less skillfully done. The earlier kiva also had a ramp-entrance. The orientation of the ramps caused considerable speculation. The ramp-entrance of the later kiva faces about 42 degrees south of true east and that of the earlier one about 38 degrees. Why the axis of the later kiva was not the same as the earlier one is a puzzle to archaeologists. Dr. Wagner Schlesinger, Director of the Adler Planetarium, Chicago, was consulted for an astronomical explanation of these orientations. Our previous guess that the sun at rising-time at the winter solstice (about December 21) would shine directly down the center of the entrance now seems unlikely. It may be that the placement of the ramp-entrance had some association with a planet or a star, but at present we do not know. The roof of the kiva was supported by several (perhaps



four to nine) very large posts, as shown by nine mammoth postholes seven feet deep and more than two feet in diameter. Since both kivas used the same floor, it was not possible to decide which group of postholes belongs to which kiva.

After uncovering the kivas, Chief Curator Martin and crew excavated two more pueblos or villages (one of at least thirty rooms) in their search for one of the latest towns occupied before the entire region was deserted. From it they hoped to find why the people had moved out of this fertile area, but to determine what is "latest" is not easy. It is now believed that some of the latest villages have been found and excavated, although Martin is still in the dark as to the reason or reasons for the abandonment of the area. The best guess now is that drought or a shift in the rainfall pattern made farming difficult or impossible. In the pueblos were found almost forty whole or restorable pieces of pottery, a milling room containing three corn mills (coarse to fine) and pottery receptacles for catching the flour, a small duck-effigy pot, several rectangular stone bowls, stone axes, bone awls, and stone beads.

What information do these remnants of household and ceremonial paraphernalia yield? It seems fairly clear that the Mogollon Indians were beginning to place more reliance on their cultural devices than on their biological mechanisms. Instead of being limited to a few wild foods, they acquired an abundant and nutritious food-supply—corn, beans, and squash. In winter they could retire to well-built stone houses heated by a central fire-pit and ventilator instead of shivering in a cave or a shelter of skins. In addition, they gradually were learning to convert raw materials to serve their needs and to make pottery from clay, knives and axes from stone, and clothes, textiles, and sandals from fur or plant fibers.

Chief Curator Martin has finished his analysis of the architectural features of the various sites excavated in 1954 and will prepare the summary-synthesis of the report on the season's work, which will be published by the Museum. Under his direction John Pletinckx, Ceramic Restorer, repaired or restored some thirty pieces of prehistoric pottery recovered from the sites. Mrs. James Barter, graduate student of the University of Arizona, Tucson, is contributing to the report a chapter on the pottery excavated this past season. In order that her study of the late pottery of the area be more comprehensive, a study of some pottery excavated north of the Reserve area a few years ago and now part of the collections of the Department of Anthropology of the University of Arizona will be included in Chief Curator Martin's final report. In this study 261 whole pots, mostly from graves, will be analyzed.

In connection with this ceramic project Miss Elaine Bluhm, Assistant in Archaeology, and Mrs. Barter are preparing a careful definition of a ware known as Tularosa Black-on-White, a term that has been widely used by archaeologists for thirty years but unfortunately has not been defined. From this work, which includes analysis of 6,000 sherds and 400 whole pots (recovered by eleven Southwest archaeological expeditions), will come a complete description of the latest black-on-white pottery in the Reserve area and perhaps important clues as to the fate of the Mogollon Indians of Pine Lawn Valley and surrounding country. During the spring Miss Bluhm analyzed the textile fragments from Higgins Flat Pueblo, the large prehistoric Indian village in western Mexico excavated in 1953. In May and June, assisted by Mrs. Marilyn Corcoran, a volunteer student, she studied pottery from the Southwest archaeological expeditions of 1952 and 1953.

During the first months of the year Assistant Curator Rinaldo collaborated with Chief Curator Martin on the report to be published by the Museum of the excavation of Higgins Flat Pueblo and assisted in preparation of maps and illustrations. From June into September, Rinaldo supervised excavation for the Southwest Archaeological Expedition and, after his return, continued the analysis of the stone, bone, and clay artifacts that was initiated in the field. In June the Museum published *Caves of the Reserve Area*, a report by Martin, Rinaldo, and Bluhm wherein are described excavations in four caves in New Mexico and materials from them.

Dr. Donald Collier, Curator of South American Archaeology and Ethnology, continued his study of Peruvian civilization. He revised for publication a paper on this subject as a contribution to a symposium on the growth of early irrigation civilizations and wrote another that will form a chapter in a book entitled "The Ways of Civilization" to be published by the University of Chicago Press. He continued his collaboration with Dr. A. L. Kroeber, Research Associate in American Archaeology, in a study of the Museum's collection of Nazca material that was excavated by Dr. Kroeber on a Museum expedition to Peru in 1926. Dr. Kroeber's report, *Proto-Lima, a Middle Period Culture of Peru*, was published by the Museum in December.

During the latter part of April, George I. Quimby, Curator of North American Archaeology and Ethnology, and James R. Getz, of Lake Forest, Illinois, made an archaeological reconnaissance of the lower Mississippi Valley. Surface collections of artifacts representative of the Poverty Point culture (about 400 B.C.) were made at the Jaketown site near Belzoni, Mississippi, and at the

Poverty Point site in northeastern Louisiana. A small collection of late seventeenth-century Natchez artifacts was obtained from the former Grand Village of the Natchez (Fatherland Plantation site) near Natchez, Mississippi. A primary objective of the field trip was to relocate the site (near Natchez) where more than one hundred years ago Dr. Montroville W. Dickeson found a human pelvis-bone associated with bones of the extinct sloth, mastodon, and other animals. The probable location of the original finds was determined from historical evidence, but erosion had completely removed the locus of Dickeson's discovery. During the year Curator Quimby continued research in Southwestern ethnology in connection with the preparation of new exhibits for Hall 7 (Ancient and Modern

The Hopi woman grinding corn is one of a life-size family group shown in a model room of a Hopi apartment in Hall 7 (Indians of the Southwestern United States).



Indians of the Southwestern United States). He also continued study of Paleo-Indians in the Great Lakes and Mississippi Valley regions, completed a report on a stratified protohistoric and historic Indian site near Bayou Goula in Iberville Parish, Louisiana, and undertook research on Kwakiutl (Northwest Coast) Indian ethnology.

M. Kenneth Starr, Curator of Asiatic Archaeology and Ethnology, continued planning for the renovation of the Asiatic exhibits and for the supplementation of the collections. During the early summer he made a seven-week tour of a number of eastern museums that have outstanding Oriental collections. On this trip he observed the scope of the collections, studied exhibition techniques and methods of handling Chinese bibliographical materials, and examined Chou-period ceramics. Throughout the year he has been carrying on research on the Chou period of early China. In keeping with this interest he completed the translation of a Chinese archaeological monograph, which translation is to be published by Yale University.

Dr. Fay-Cooper Cole, Research Associate in Malayasian Ethnology, who conducted the R. F. Cummings Philippines Expedition (1907-11), completed his report on the Bukidnon, who live on Mindanao. Dr. Fred Eggan, of the department of anthropology of the University of Chicago, took over the editing of this manuscript and prepared it for the Museum Press.

### Accessions—Anthropology

Hughston M. McBain, a Trustee of the Museum, presented to the Museum an early seventeenth-century Japanese short sword of exceptionally fine quality. The finely drawn blade, the silver-mounted handle, and the richly but delicately lacquered and silvered scabbard represent the best of Japanese sword manufacture. Possession of ten pieces of Chinese porcelain also passed to the Museum during the year as the result of the final disposition of the estate of the late Henry C. Schwab. The group includes a traditional T'ang jarlet, two pieces of Sung ware, and several well-executed early Ch'ing Te-hua pieces. Evett D. Hester, Thomas J. Dee Fellow in Anthropology, gave to the Museum 134 representative pieces from his collection of rare fourteenth- to eighteenth-century Chinese, Siamese, and other Southeast Asian porcelains and pottery. All the specimens donated are grave furniture or ceremonial or heirloom pieces recovered in the Philippines. Mr. Hester was assisted in the field in making and cataloguing his collection by Professor H. O. Beyer of Manila, an Honorary Member of the Museum.



## Exhibits—Anthropology

Twenty-six new exhibits were designed and prepared for Hall 7 (Ancient and Modern Indians of the Southwestern United States) by Artist Gustaf Dalstrom and Preparator Walter C. Reese. Dioramist Alfred Lee Rowell worked on the construction of three dioramas that illustrate the archaeology of the Southwest. Two new exhibits dealing with Old World prehistory were installed in Hall C (Stone Age of the Old World) to replace obsolete exhibits.

## Care of the Collections—Anthropology

The exhibition program for Hall 7 (Ancient and Modern Indians of the Southwestern United States) necessitated removing thousands of specimens from old exhibits, which exacting work was done by Whitney Halstead, Assistant, under the supervision of Curator Quimby. The department was aided also during the year by Phillip H. Lewis and Nicholas Millet, assistants, by Antioch College students Eugene Klotz, Robert Lamb, and Miss Barbara Schwartz, and, during the summer, by four volunteers, Miss Maryanne Atherton, Miss Beatrice Dvorak, William Ellis, and Philip Young.

Evet D. Hester, Thomas J. Dee Fellow, Anthropology, and Roger T. Grange, Assistant in Anthropology, began in June the cleaning and checking of the ethnographic collections from the Philippines, Southwest Asia, Madagascar, and Oceania, their removal from overcrowded storerooms on the third and fourth floors, and their arrangement in new quarters on the ground floor. The Pacific Research Laboratory, as the newly converted area has been designated, is probably the largest and most completely equipped anthropology storage-room among museums of the world. Its construction follows, except in minor details, the plans originally drawn by Dr. Alexander Spoehr, former Curator of Oceanic Ethnology, under the direction of Chief Curator Martin.

There are more than 17,000 square feet of shelving, an ample workroom, and a large fully equipped poison-room (high-capacity fans are provided to clear the poison-room and working area). Virtually the entire installation is of steel. Special installations were placed in several alcoves to accommodate oversize specimens, such as tall carved figures, house-ladders, and the large wooden Admiralty Island bowls. Racks, designed for the great Melanesian drums, were mounted on heavy castors to allow placement and removal of the drums by means of a fixed-position chainhoist; wire

panels were installed in a row of bins to permit the vertical hanging of small masks; and racks were built in the poison-room to hold horizontally the large but delicate masks from New Britain. An essential operative requirement was the duplication by microfilm of the master card-catalogue of more than 50,000 descriptive cards. The Pacific Research Laboratory project was aided by generous grants from the Wenner-Gren Foundation for Anthropological Research and from the Philippine Studies Program financed by the Carnegie Corporation of New York (see page 81). When the project is completed, all specimens for the area will be properly and safely cared for and will be readily accessible for reference and study by curators, other staff members, and visiting research scholars.

A section of the storage-room in the new Pacific Research Laboratory shows the accessibility of our vast ethnographic collections as the specimens are now arranged.



## Department of Botany

### Research and Expeditions

Paul C. Standley, Curator Emeritus of the Phanerogamic Herbarium, who is in residence at the Escuela Agrícola Panamericana near Tegucigalpa, Honduras, completed an annotated check-list of plants of Honduras to be published by the Honduran government and, as in previous years, identified numerous collections of plants from Honduras and other Latin-American countries. J. Francis Macbride, Curator of Peruvian Botany, continued work on a new part of his *Flora of Peru*, preparing material on various families following the Theaceae.

Dr. Earl E. Sherff, Research Associate in Systematic Botany, continued his studies of the genera *Bidens* and *Coreopsis*, as found in tropical Africa, as well as of certain genera of Hawaiian Araliaceae. Many determinations were made of specimens that had been sent to him for examination, a number of them proving to be new to science. A large proportion of these came from the Royal Botanic Gardens of Kew, England, while other assortments came from the East African Herbarium at Nairobi, Kenya Colony. His revisions of nine genera of Compositae for "The North American Flora" (New York Botanical Garden) are in press. Late in the year the Museum published his revisional study of the Hawaiian species of *Cheirodendron* (Araliaceae), of which a special edition of one hundred numbered copies printed on a grade of paper selected for permanence also was issued for the author's private distribution to key libraries and other institutions throughout the world. During his herbarium studies he continued his policy of making large, carefully detailed photographs of all type or otherwise important specimens examined, a policy inaugurated by him in the spring of 1913. In the past twelve months he added about one hundred photographs to his series, bringing the total up to more than 4,500. A complete set of prints of these is on file in the Museum and, moreover, all negatives have been donated to the Museum and added to its permanent reference collections.

Dr. José Cuatrecasas, former Curator of Colombian Botany, continued his studies of Colombian plants, especially Compositae, and published a series of papers on new species of plants from Colombia and other Andean countries (see page 78). This work is being carried on with the aid of a grant from the National Science Foundation. From June to November he studied types and critical

material of Colombian plants in European herbaria, especially in the Muséum National d'Histoire Naturelle in Paris. Dr. Margery C. Carlson, Associate in Botany, has been working at the Museum on her monograph of the genus *Russelia* (Scrophulariaceae). Before the end of the year she left for another botanical expedition to Mexico to study the various species of *Russelia* in their native habitats and to collect other herbarium material in poorly known areas.

Dr. B. E. Dahlgren, Curator Emeritus of Botany, pursued his research on palms with special attention to the genus *Copernicia*, the Cuban forms of which have occupied most of his time since 1947. With the aid of funds provided by S. C. Johnson and Son, Incorporated, as in previous years, he spent some months in field work in the parts of Cuba where the majority of the species of this remarkably distributed genus are endemic. Effective assistance in the field by Dr. Glen Moore, now of Provo, Utah, is specially acknowledged. The new South American material (which was obtained last year as a result of visits to Paraguay by Dr. E. S. McLoud and E. D. Kitzke of the research staff of the Johnson Company, with the aid of Dr. Klare S. Markley, Works Progress Administration's scientific representative in Asunción) has extended the inquiry over the entire range of the genus from Argentina to the western end of Cuba, where the first collections were made in 1947 with the collaboration of Brother León of Colegio de La Salle. As a result of the intensive field work of this and previous years the collection of *Copernicia* material brought together in the Museum has become very considerable. It now comprises a substantial representation of most of the species of the genus, including a large number of seedling stages grown as hydroponic cultures in the laboratory of the Museum and also a very large series of photographs of plant associations, juvenile and adult stages of the palms, leaves to scale, and details of flowering branches and fruit.

Dr. Theodor Just, Chief Curator of Botany, collected data and information on the obscure history of botanical museums and exhibit techniques. He also brought together modern systems of classification of the plant kingdom and compared their relative merits (see pages 75 and 79). Otherwise, he continued his study of living fossil cycads and other gymnosperms.

Dr. Julian A. Steyermark, Curator of the Phanerogamic Herbarium, made routine determinations of miscellaneous collections of plants, especially from the American tropics. In December he left the United States for Venezuela with Dr. John Wurdack of New York Botanical Garden. This joint expedition, sponsored by Chicago Natural History Museum and New York Botanical Garden,





Samples from the large collections of tropical and other woods in the herbarium of the Museum are plainly labeled and stored in drawers for reference and study.

proposes to devote its entire time to botanical exploration of the summit-flora of Chimantá-tepuí, the large table mountain in the "Lost World" of southeastern Venezuela, part of which Curator Steyermark explored in 1953 and a small section of the easternmost part of which Dr. Wurdack explored at about the same time. The expedition is expected to return sometime in April, 1955. In continuation of his work on the flora of Missouri, Curator Steyermark made trips to Missouri to collect plants from unstudied areas.

Dr. Francis Drouet, Curator of the Cryptogamic Herbarium, continued revisional studies of various microscopic algae in co-operation with William A. Daily, of Butler University, and identified numerous specimens of algae. Dr. Hanford Tiffany and Donald Richards, Research Associates in Cryptogamic Botany, proceeded with their researches on the Oedogoniaceae and on the bryophytes, respectively. Kung-Chu Fan, of the University of Chicago, made considerable progress toward a revision of the Rivulariaceae, using



Authentic seed samples are stored in vials in drawers (the plants from which the seeds were collected are deposited as vouchers in the herbarium of the Museum).

as a basis for it the Museum's collection of these plants. Mrs. Fay K. Daily, of Butler University, and Dr. Herman S. Forest, of the University of Tennessee, spent periods of various lengths at the Museum in research on algae.

Dr. John W. Thieret, Curator of Economic Botany, carried on his systematic studies of wild and cultivated Scrophulariaceae. Representatives of a number of species of this family were grown in the botany greenhouses of the University of Chicago from seed supplied by botanic gardens in Barcelona, Berlin, Brussels, and Kew. In connection with his studies on seed and fruit morphology, he commenced during the final third of the year the building-up of an extensive reference and study collection of authentic seed samples, previously not possessed by the Museum, backed by herbarium specimens from the same plant or colony as the seeds. Considerable time was given in the field to gathering and in the Museum to preparation of seeds and the accompanying herbarium specimens.

## Care of the Collections—Botany

During the year 11,090 plants in the phanerogamic herbarium were repaired as required and mounted. Mounting and poisoning was done by Miss Olive Doig, Mrs. Jennie Pletinckx, and Nils Siegbahn, assisted by Robert Yule and, for part of the year, by Miss Edith Greisman, Antioch College student. Mrs. Effie M. Schugman and Miss Alice Middleton mounted a large number of cryptogams for filing in the general collections and repaired and repackaged a major part of the collection of algae. Work on the restoration of the type-photograph collection was continued by J. S. Daston, Assistant in Botany. Mrs. Lenore B. Warner continued cataloguing and filing negatives, positives, and prints and handled all orders for prints sold or sent in exchange. Curator Thieret was assisted in reorganization of the wood collection by Mrs. Ann Bigelow, who finished processing the major collections of woods and completed the alphabetizing of families Liliaceae through Zygophyllaceae and the removal of duplicates. A total of 3,013 wood specimens was sent out in exchange. Late in the year a group of six Girl Scouts from Downers Grove, Illinois, started to mount plants for the Museum under the direction of Miss Doig as a part of their training for the award of "Museum Aide" merit badges (see page 22).

## Exhibits—Botany

Of the fifteen branches that were added to the exhibits in Charles F. Millsbaugh Hall (North American Woods, Hall 26) nine models were plastic reproductions. The branches of sassafras (*Sassafras albidum*), winged elm (*Ulmus alata*), Kentucky coffee-tree (*Gymnocladus dioica*), mockernut (*Carya tomentosa*), and chestnut oak (*Quercus montana*) were assembled by Artist-Preparator Samuel H. Grove, Jr., and the sugarberry (*Celtis laevigata*) and pignut hickory (*Carya glabra*) by Technician Frank Boryca, who also prepared the plastic leaves for the whole series. Curator of Exhibits Emil Sella assembled the models of mountain magnolia (*Magnolia Fraseri*) and swamp cottonwood (*Populus heterophylla*) and restored the following original branches: loblolly pine (*Pinus taeda*), slash pine (*Pinus caribaea*), red cedar (*Juniperus virginiana*), long-leaf pine (*Pinus palustris*), tamarack (*Larix laricina*), and white pine (*Pinus strobus*). The only important addition during the year in Martin A. and Carrie Ryerson Hall (Hall 29, Plant Life) is a colorful branch of purple-flowered rhododendron (*Rhododendron catawbiense*) made by

Curator Sella, assisted by Technician Boryca. This is the first reproduction of several specimens that were recently collected in the Great Smoky Mountains for exhibition in this hall. Assisted by Preparator Walter Huebner, Curator Sella reconditioned and reinstalled the bamboo and tobacco exhibits in the Hall of Plant Materials and Economic Products (Hall 28).

### Accessions—Botany

The largest gift to the phanerogamic herbarium during the year was 5,625 plant specimens from the Department of Biology of Valparaiso University, which was obtained through the courtesy of Dr. Henry B. Poncher. Other large gifts include 3,762 plants of the United States collected by Holly Reed Bennett, 1,222 plants of Hawaii presented by Research Associate Sherff, and 1,565 plants of Missouri collected and presented by Ernest J. Palmer, of Webb City, Missouri. Among valuable plants received through exchange are 818 plants of El Salvador from the University of California, 762 plants of Central America from the Escuela Agrícola Panamericana of Honduras, 575 plants of South America from the Muséum National d'Histoire Naturelle of Paris, 374 plants of Ecuador and Venezuela from the New York Botanical Garden, and 240 plants of Africa and Asia from the British Museum (Natural History). The most significant additions (by purchase) of plants from countries not well represented in the collection include 1,000 plants of Australia collected by Professor B. Kaspiew, 203 plants of Africa collected by James Sidey, and 300 plants of Japan collected by Makoto Togasi.

The chief accessions of the cryptogamic herbarium were 7,401 lichens and bryophytes from Dr. Camillo Sbarbaro, of Spotorno, Italy (part purchased through the Elmer J. Richards Fund and part a gift), 784 bryophytes from the Botanical Museum at Uppsala, Sweden (exchange), and 556 Characeae of Indiana from Mrs. Fay K. Daily, of Indianapolis (gift). Four hundred lichens of Sweden were purchased from Dr. Gösta Kjellmert, of Arboga, Sweden, with funds provided by Research Associate Donald Richards.

As a result of new exchange agreements, mainly with foreign institutions, the Museum's wood collection was increased by specimens from areas previously not well represented, among them Kenya, Gold Coast, French Equatorial Africa, Cameroons, Madagascar, Reunion, New Caledonia, and Israel. The largest collection received in exchange, 218 specimens from various French possessions in Africa, was sent from the Centre Technique Forestier Tropical,



Nogent-sur-Marne, France. A total of 808 wood specimens, about two thirds of which are from the New World, was accessioned during the year. Curator Thieret collected 280 seed samples and accompanying herbarium specimens and, in the Chicago area and Missouri Ozarks, wood samples from various shrubby species not included in the Museum's wood collection.

The Department of Botany received as a gift from Northwestern University Library the *Index to American Botanical Literature*, issued regularly since 1894 by the Torrey Botanical Club, oldest botanical society in the United States. Consisting of more than 75,000 printed cards, the Torrey Botanical Club *Index* aims to list, under the authors' names, all papers and books pertaining to American plants and thus provides a valuable source of reference to all interested users. Now housed in two steel cabinets in the library of the Museum's Department of Botany, this *Index* is being carefully checked and refiled by Miss Edith M. Vincent, Research Librarian. The transfer of this gift was arranged through the courtesy of Ian W. Thom, Chief of Technical Service, Charles Deering Library, Northwestern University, and Associate Margery C. Carlson.

The model of purple-flowered rhododendron in Martin A. and Carrie Ryerson Hall is based on material collected recently in the Great Smoky Mountains of Tennessee.



# Department of Geology

## Research and Expeditions

The year's most extensive field-project in the Department of Geology was the transportation of a large quantity of highly fossiliferous marine Pennsylvanian shale for a distance of nearly two hundred miles from a quarry near Mecca, Indiana, to the Museum. The outcrop was discovered in 1953 by Dr. Rainer Zangerl, Curator of Fossil Reptiles, but no large-scale excavation was begun until May of this year. The project was undertaken to study the environmental conditions of invertebrates and vertebrates at the time and place where the shale was deposited. Both Curator Zangerl and Dr. Eugene S. Richardson, Jr., Curator of Fossil Invertebrates, are engaged in the work (see pages 19 and 53).

The slabs of shale have been reassembled in their original stratigraphical sequence in one of the workrooms at the Museum, and critical examination of the fossil content has been in progress since the end of the field season. Distribution, orientation, and character of the fossils are being charted for every quarter-inch layer of rock. When completed there will be some six hundred charts, which will handily provide the basic information for future concentrated study. Besides paleoecological information the Mecca quarry has produced hundreds of interesting specimens for paleontological study, including sharks and early bony fishes as well as arthropods, mollusks, conodonts, and sponges. The Mecca operation has aroused a good deal of interest among geologists and paleontologists besides those on the Museum staff. At least three parties of visitors—from the American Museum of Natural History, University of Chicago, and University of Illinois (Urbana)—visited the work in progress and discussed various problems in the light of their own studies.

Curators Zangerl and Richardson were assisted in the field by Preparator William D. Turnbull, Peter Garrison, Antioch College student, and Richard McClung, Chicago high-school student, and in the Museum workroom by Peter Garrison and Miss Shirley Hale, also an Antioch College student. Mrs. Mary Sue Hopkins Coates, Departmental Secretary, has been compiling the data in charts.

Curator Zangerl and Preparator Turnbull completed a paper on the Miocene seaturtle *Procolopchelys grandaeva*. The paper, which deals with the evolution of the cheloniid seaturtles, may serve as a contribution to our knowledge of the subject. Curator Zangerl has now begun a description of a seaturtle from the Mooreville Chalk.



Dr. Robert H. Denison, Curator of Fossil Fishes (center), and scientists of the Paleontologisk Museum in Oslo examine a slab of rock containing numerous entire cephalaspid fishes found in Upper Silurian rocks during Denison's stay in Norway.

Dr. Robert H. Denison, Curator of Fossil Fishes, after spending the latter part of 1953 in Oslo and Stockholm (see Annual Report, page 47), moved to London early in 1954 to study at the British Museum (Natural History), where he compared North American Devonian vertebrates with similar material from classical European localities and amassed data for a study of the ecology of early vertebrates. During the spring and summer months he visited many of the Silurian and Devonian localities in Great Britain and obtained an excellent collection of fossil vertebrates that includes a number of genera and families not previously represented in our collections. Thanks are given to the John Simon Guggenheim Memorial Foundation for the opportunity to pursue this study. Since his return he has been engaged in describing some Devonian fishes that he collected while on a field trip in Nova Scotia in 1952.

Bryan Patterson, Curator of Fossil Mammals, who spent 1952 and the early part of 1953 in Argentina studying specimens of fossil mammals in the collections of the museums there (see Annual Reports: 1951, page 51; 1952, page 47; 1953, page 47), went back to Argentina in August to complete his work. This was made possible by the renewal of a grant from the John Simon Guggenheim Memorial Foundation. He expects to resume his duties and studies at the Museum in January, 1955.

In April, Curator Patterson and Orville L. Gilpin, Chief Preparator of Fossils, left for Texas to continue field operations in the Early Cretaceous mammal-bearing Trinity sands in Montague County (this work, which is being carried on in collaboration with the Texas Memorial Museum and the Bureau of Economic Geology of the University of Texas, has been in progress since 1949). Concentrates washed from several tons of sand in the productive level were shipped back to the Museum laboratory for examination under the microscope, and a number of geological observations were made. At the termination of the work, early in June, the party investigated the report of a dinosaur skeleton near Hanksville, Utah, but the specimen proved to be too incomplete to warrant collecting.

The exacting work of sorting the Trinity concentrates grain by grain was carried on during the year by Miss Nancy Robertson, college student. Numerous specimens of mammals and of other small vertebrates have been found, and an interim report by Curator Patterson on the mammals with a consideration of various problems posed by them is in the press. Chief Preparator Gilpin spent three weeks in eastern museums studying methods of preparing and exhibiting dinosaurs.

George Langford, Curator of Fossil Plants, continued his studies of the Pennsylvanian flora of Wilmington, Will County, Illinois. His report on the flora, to which he has given the greater part of his time, is nearing completion. To date he has dealt with 360 species, of which seventy are new. The part of his report pertaining to fruits may prove of the greatest interest. An unusual feature of the Wilmington deposit is that this ancient economically productive coal-bed, covering a comparatively small area, has already yielded more than six hundred species of flora and fauna. Curator Langford devoted part of his time to study of the plant material that he collected in 1953 from the Lower Eocene and Upper Cretaceous clay deposits of Tennessee and Mississippi. The collection, which was made from four distinct geological formations, consists of a large number of finely preserved leaves and stems, and he expects to augment the collection with specimens from a fifth formation.



As in the past two years, Dr. Sharat K. Roy, Chief Curator of Geology, devoted a substantial part of his office hours to supervisory work and to writing descriptive labels relating to the re-installation of the Hall of Physical Geology (Hall 34). In the intervals he continued his studies of meteorites and completed a paper on the Paragould meteorite in joint authorship with Robert K. Wyant, Curator of Economic Geology, for publication by the Museum press. In preparation for the manuscript he visited the United States National Museum, where he made a critical study of the smaller individual of the Paragould meteorite and of a number of other closely related meteorites. He also continued preparation of a catalogue of the meteorites in the Museum's collections. In this he was assisted by Mrs. Coates and Miss Norma Hall, Antioch College student. Again in collaboration with Curator Wyant, he drafted a paper on the occurrence of oolite-like bodies in the lacustrine deposit, which extends for many square miles in a basin east of the foothills of volcano San Salvador, El Salvador, Central America. The material was collected by him while he was engaged in field work in El Salvador during April, May, and June of this year. During his stay he went over again the ground that he covered in 1951, specifically the five groups of volcanoes, which will be included in the proposed monograph on the volcanoes of Central America. For kind co-operation and for the opportunity to carry on field work we extend our thanks to the staff of Instituto Tropical de Investigaciones Cientificas, Universidad de El Salvador.

In the geochemical laboratory, Curator Wyant made two additional analyses of the Paragould meteorite, each of which included the determination of seventeen elements and/or oxides, and also conducted experiments on the effect of heat on the same meteorite. Because the heating had to be done in a vacuum for which the Museum laboratory is not equipped, these tests were performed at the Institute for Nuclear Studies at the University of Chicago. Other laboratory studies included determination of the troilite content of several specimens of the Canyon Diablo meteorite. The processes of low temperature and low pressure metamorphism of certain sedimentary rocks from southwestern Illinois were studied, both from laboratory data and theoretical considerations. He spent the month of July in the field collecting iron ores, with particular emphasis on the taconite iron ores, and visited several mines and plants in Minnesota and Michigan. Some of the numerous ore and rock specimens collected will be used in the preparation of a taconite exhibit for Hall 36 (taconite, a ferruginous chert, is now being exploited to compete with ores rich in iron).



Geologists at the Museum study a map of the Mecca (Indiana) quarry to determine the correct layout of the slabs of Mecca shale in the workroom of the Museum.

In addition to his field and laboratory work on the Mecca project, Curator Richardson reviewed the fossil crabs and lobsters in the study collection and revised their identification. This was made necessary by the accession of nineteen specimens of a Cretaceous lobster, a gift from Burrell F. Hazel (see page 54). The new specimens revealed certain details not hitherto observed in the species, and Curator Richardson worked on a revised description for future publication. He also prepared two papers on Pennsylvanian invertebrates from the strip mines of Will and Grundy counties, Illinois. One of these papers deals with a new species of amphineuran mollusk ("sea mouse"), the other with the first recognized New World representative of the giant arthropod *Arthropleura*. In co-operation with Curator Zangerl, he made extensive comparisons of Pennsylvanian coprolites from the strip-mine collection with Permian coprolites in the study collection and with the relevant anatomy of present-day lungfishes and sharks in the custody of the Division of Fishes of the Department of Zoology.

## Accessions—Geology

The most noteworthy accession of the year is a skeleton of the spectacular flesh-eating dinosaur *Gorgosaurus libratus*, a gift to the Museum by members of the Board of Trustees. It is planned to exhibit the specimen as a monstrous predator standing over its prey, a large duck-billed dinosaur. A second notable addition was a collection of Pleistocene mammals from the famous tar-pits of Rancho la Brea, Los Angeles, donated by Northwestern University Dental School, a gift deeply appreciated. A small but select collection of Devonian vertebrates from Spitsbergen and Norway, received through exchange with the Paleontologisk Museum in Oslo, includes a number of genera new to our collections. The largest addition to the study collection of fossil invertebrates was the generous gift by Byron Harvey, Jr., and Byron Harvey III of a large number of well-labeled specimens from a variety of European localities. Several successive gifts from Burrell F. Hazel of Fort Peck, Montana, made significant additions to the study collections of fossil fishes, fossil plants, and fossil invertebrates, particularly noteworthy among which are nineteen fine specimens of the Cretaceous lobster *Hoploparia westoni* from a new locality in Montana, a species hitherto known from only two specimens, both found in Alberta. Thirty-one specimens of rocks and minerals from the Antarctic region (purchase) are a valuable addition to the lithological and mineral collections, which heretofore lacked representations of geological specimens from this region. Some of these specimens will be used in an exhibit.

## Care of the Collections—Geology

The Department of Geology is fortunate in that no special care is demanded for geological specimens. Carding, cataloguing, and putting them away in an orderly and easily accessible manner is a routine procedure. Specimens subject to oxidation are treated with proper antitarnish reagents. The recent resignation of the Assistant in the Division of Fossil Vertebrates, Mrs. Priscilla F. Turnbull, leaves the paleontological collections without a custodian. During her tenure the large collections contained in the gift from the University of Chicago were received, and the integration, carding, and, in part, cataloguing of these were done by her. In addition, practically all fossil vertebrates in the Museum were carefully checked against the records and catalogue cards prepared for many of them. As a result, the vertebrate collections are in splendid order.

## Exhibits—Geology

Eleven exhibits, all devoted to lithology, were completed and installed in the new Hall of Physical Geology (Hall 34). Two of these exhibits consist of material introductory to the study of rocks and nine contain specimens and information relating to the origin, characteristic features, and classifications of the three main classes of rocks: igneous, metamorphic, and sedimentary. Miss Maidi Wiebe, Artist, has done all the paintings, which, individually or collectively, have enhanced the attractiveness of the exhibits and added much to the understanding of the subject-matter. Harry E. Changnon, Curator of Exhibits, and Preparators Henry Horback and Henry U. Taylor have given their best efforts to make each exhibit an outstanding success. During the year arrangements were made with George Marchand, sculptor-artist, of Ebenezer, New York, for the construction of four dioramas representing classic areas where the work of geological agents is manifest. Plans call for the completion of the dioramas by September, 1955, which will coincide with the final installations and preparations for opening the hall. The first of a number of new dinosaur exhibits, a small ceratopsian from Asia, *Protoceratops andrewsi*, facing its nest of eggs, has been completed and installed in Ernest R. Graham Hall (Hall 38, Fossil Vertebrates). It was prepared by Chief Preparator Gilpin and Preparators Stanley Kuczek and William D. Turnbull (see below).





# Department of Zoology

## Research and Expeditions

Two expeditions during the year engaged in general collecting for three or more divisions of the Department of Zoology. The Peru Zoological Expedition of 1953-54, conducted by Assistant Taxidermist Celestino Kalinowski, worked in northern Peru during the first part of the year and later made the trip down the Madre de Dios River in little-explored southeastern Peru. Throughout the year Mr. and Mrs. Gerd H. Heinrich, of Dryden, Maine, were engaged in collecting birds, mammals, amphibians, reptiles, and insects in Angola (Portuguese West Africa) on a Museum expedition financed by the Conover Game-Bird Fund. Harry Hoogstraal, Field Associate, who organized collecting in central Anatolia and obtained significant additions to the collections made in 1953, continued to collect in Egypt and contributed specimens to the various divisions during the year.

In the Division of Mammals, Curator Colin Campbell Sanborn has focused his attention on his revisions of various genera of bats in relation to his project for a catalogue of the Microchiroptera (small bats) of the world, work that is supported by a grant from the National Science Foundation. In November, at the invitation of Dr. J. L. Pawan, government bacteriologist, he visited Trinidad, where, with the cordial and effective aid of the island officials, he was most successful in collecting and in field observation for preparation of a key for identification of the bats of Trinidad. During the year, in his position of special consultant to the United States Public Health Service, he identified numerous collections of bats in connection with studies of rabies in bats. Associate Luis de la Torre, who made a short field trip to western Mexico to advance his study of interrelationships of the leaf-nosed bats of the New World and, more particularly, his revision of the genus *Sturnira*, obtained, in addition to the much-desired additional material of a species of *Sturnira*, a number of other rare forms for the collections. Associate Curator Philip Hershkovitz continued his studies, begun in 1953, of various South American genera of cricetine rodents.

The first of January found Dr. Austin L. Rand, Curator of Birds, in the Philippines, where he had remained for ornithological field work after attending the Eighth Pacific Science Congress in late 1953. Accompanied by Field Associate D. S. Rabor, he collected on the islands of Negros, Bohol, Cebu, and Siquijor and on the

peninsula of Zamboanga, returning to the Museum early in February. His further researches during the year included studies of the land birds of Tristan da Cunha, a remote island in the South Atlantic; a revision of the African bulbuls of the family Pycnonotidae, as part of the continuation of Peters' *Check-list of Birds of the World*, which is being completed for publication by Harvard University Press; field studies on the behavior of a Philippine kingfisher and a Florida wood-ibis; and studies on the birds of Nepal, in association with Dr. Robert L. Fleming, Field Associate, who returned from that country late in the year. Associate Curator Emmet R. Blake completed editing manuscript for thirteen families of North American birds for the forthcoming new edition of *Check-List of North American Birds* (American Ornithologists' Union) and continued studies relating to the several families of vireos for his share in the continuation of Peters' *Check-list*. Other studies were directed to neotropical birds from Mexico to Peru.

Dr. Karl P. Schmidt, Chief Curator of Zoology, continued research on American coral snakes and on the amphibians and reptiles of southwestern Asia. Research in the Division of Amphibians and Reptiles has been dominated by the study of the large collection of frogs and toads received from the Parcs Nationaux du Congo Belge for report by Chief Curator Schmidt. Dr. Robert F. Inger, Curator of Amphibians and Reptiles, who is collaborating on this report, has made preliminary identification of the species, and Assistant Hymen Marx, who has already done the essential work of indexing the pertinent literature, has of necessity also been drawn into it. It is now hoped that, with the support of the Parcs Nationaux, the very large series of several of the species may be made scientifically significant by studies of their food, for which comparable and adequate numbers of specimens are available for every month of the year. Curator Inger spent a week studying types and other African material at the Museum of Comparative Zoology at Harvard in connection with the Congo studies. The reproductive cycle of various species is being investigated in collaboration with Dr. Bernard Greenberg, of Roosevelt University. Curator Inger also continued his study of the amphibians and reptiles of Borneo and, in collaboration with Assistant Marx, completed a manuscript on the burrowing snakes of the genus *Calamaria*, which is notably represented in Borneo. Marx prepared a list of the division's type-material for publication.

In the Division of Fishes, Curator Loren P. Woods continued his investigation of the fauna of the Gulf of Mexico and adjacent Caribbean waters with regard to geographic and ecological distri-



bution and taxonomy, giving particular attention to the little-studied pelagic fishes. At the end of the year he was established at Salina Cruz, on the Pacific side of the Isthmus of Tehuantepec, where he was engaged in active collecting of the fishes of the Pacific coast of Mexico. His field trip will continue at more northern stations on the Mexican west coast. Miss Pearl Sonoda, Assistant, identified several small collections of fishes. Mrs. Marion Grey, Associate, has continued her study of deep-water fishes collected in the Gulf of Mexico by the research motor-vessel *Oregon* of the United States Fish and Wildlife Service and has completed her report on the fishes collected by the Museum's Bermuda Deep-Sea Expedition of 1948. Also in press are a review of the genus *Tetragonurus* based on specimens taken by the Danish *Dana* expeditions and a taxonomic note on *Melamphaes anthrax*. Dr. Edward M. Nelson, Associate, continued his studies of the swim bladder and inner ear of fishes.

Rupert L. Wenzel, Curator of Insects, spent two months in the Pacific states making extensive collections of the histerid beetles of coastal beaches and of western pine forests in an attempt to clarify the classification of these insects, and he also examined collections in western museums of the family Histeridae, on which he is one of the world's leading specialists. He spent much time during the year in the study of a large collection of histerid beetles received from the British Museum (Natural History) and of a smaller collection from the Naturhistorisches Museum of Vienna. Associate Curator Henry S. Dybas spent two weeks investigating the insect inhabitants of the nests of leaf-cutting ants and of the nests of pocket gophers in central Louisiana. He is engaged on continued studies of beetles of the family Ptiliidae and prepared a paper on new genera and species of this family associated with termites. Dr. Charles H. Seevers, Research Associate, completed his monograph on the termite-nest-inhabiting staphylinid beetles of the world. This work was begun in 1940, and its completion enables him to turn to the revision of other major divisions of the family. He also completed a paper on the remarkable staphylinid beetles that live in the fur of small mammals in Central and South America, finding a considerable degree of host-specificity in these species comparable to the relations familiar in the much more specialized fleas and lice. Miss Lillian A. Ross, Associate in the Division of Insects, continued her studies of spiders.

Dr. Fritz Haas, Curator of Lower Invertebrates, has continued his identification of South American collections of nonmarine mollusks, received from individual correspondents and from the Museum's zoological expedition to Peru, with the resultant discrimi-



Artist Joseph B. Krstolich completes an exhibit on marsupials and monotremes, one of a series designed to explain the classification of mammals in Hall 15.

nation of numerous new species, descriptions of which are in press. It has been a major gratification to him to complete and see through the press the section on the ecology of the bivalve mollusks for *Bronn's Tierreich*, which was interrupted by World War II. During February, March, and April he was in Palestine for zoological collecting and study in the field. Extraordinarily effective co-operation was supplied by the staff of the Hebrew University in Jerusalem, which not only made available headquarters at the university but also provided a jeep and detailed Dr. J. Wahrmann, of the university staff, to accompany him on visits to the different types of habitat and to aid him in collecting. His collections of fresh-water mollusks and of land snails were supplemented by gifts of material from Dr. Georg Haas, Field Associate, who is professor of zoology at Hebrew University, Jerusalem, Israel.

The major research of the Division of Vertebrate Anatomy continued to center around the evolution of the Carnivora, with special attention devoted to the structure and mechanics of the ankle joint. Study of the mammals collected by the expedition to Borneo in 1951 was continued, and reports embodying the results were nearing completion at the end of the year. Study of the placentation and fetal membranes of the pigmy treeshrew, based on material collected by the expedition, was begun by Dr. Waldemar Meister, Associate, and Curator D. Dwight Davis. During a six-month stay at the California Institute of Technology, Curator Davis used the facilities of the hydrodynamics laboratory of the Institute to study the swimming dynamics of the tadpole, work that was designed to give an insight into the mechanical factors underlying the origin of vertebrate limbs. William D. Turnbull, Preparator in the Department of Geology, continued study of adaptive radiation in the masticatory musculature of mammals and during the year dissected the jaw-muscles of a porcupine and a cat. Dr. R. M. Strong, Research Associate, continued his studies of the anatomy of birds and salamanders but devoted much of his time also to activities in connection with conservation in the Chicago region.

Miss Laura Brodie, Assistant, carried on the annual check of marked blue-racers in the Indiana dune region. This work is part of the long-term project of the Division of Reptiles to learn more about the movements and hibernation of this snake.

### Accessions—Zoology

The purchase of 600 selected specimens of mammals from the collections of the Bombay Natural History Society and of about 1,000 specimens from Assam (from Dr. Walter Koeltz) has added to the study collections a number of genera and numerous species of mammals of India hitherto unrepresented in Chicago. Among important accessions of birds during the year are those from the Conover Angola Expedition (1,096 specimens) and the material collected by Field Associate Fleming and his associates in India and Nepal. Material received from the Philippines Study Trip, Field Associate Rabor, and the National Museum of the Philippines totals 617 specimens.

The outstanding addition to the collections of the Division of Amphibians and Reptiles for the year is a set of paratypes of 50 species of amphibians and reptiles received through exchange with the Museum of Comparative Zoology at Harvard University. A

small collection from Father A. Buch, of Dalat, Vietnam, contains remarkable forms new to the collection and includes a very distinct new species of *Calamaria*, the group of snakes of especial current interest to the division. In the Division of Fishes the Museum's share of the "Crossroad Collections," received in 1954 through co-operation with the United States National Museum, amounted to 5,028 specimens (see page 80 for descriptive catalogue of this material). The Museum continued to receive fine collections of fishes of the Gulf of Mexico and Caribbean Sea from the United States Fish and Wildlife Service. The most important single accession of the year for the Division of Vertebrate Anatomy was a collection of several hundred nonhuman skulls and skeletons presented by Northwestern University Dental School (primarily the collection of the late Dr. William Bebb, of the university staff).

In the Division of Insects the most important accession of the year was the Gerhard Collection of Hemiptera-Heteroptera, or true bugs, presented by Curator Emeritus William J. Gerhard, who collected and studied these insects for fifty years and is a recognized authority on the group. The Gerhard Collection totals 10,810 specimens, mostly from North America. The McElhose Collection of North American butterflies and moths, which consists of about 12,000 specimens and is especially rich in the Microlepidoptera (small moths hitherto scarcely represented in the Museum's collections), was presented by the family of the late Arthur L. McElhose, of Arlington Heights, Illinois. Other valuable gifts of insects and allied forms were received from Dr. David Cook of Wayne University (types of 11 species of water mites) and from the American Museum of Natural History (198 beetles, including 49 paratypes). Through the courtesy of A. S. Vernay, the Museum will share in an important entomological collection secured in South Africa by the Vernay-Transvaal Museum Expedition to Kunene River and Angola. From Fritz Plaumann, of Nova Teutonia, Brazil, the Museum purchased 7,210 beetles, including a small but valuable collection of Brazilian bark and timber beetles that contains 285 paratypes.

The shell collection of the late James H. Ferris, which had been stored since his death in Joliet (Illinois) Township High School, was acquired by the Museum in exchange for a selected collection that could be used in the teaching of biology. The Ferris Collection includes some 3,000 lots of shells and a large number of paratypes and of topotypes of land-snails of southwestern United States, a region in which Mr. Ferris made pioneer studies. From the private collection of his father, the late Carter H. Harrison, who was five times mayor of Chicago, Carter H. Harrison, Jr., of Chicago, pre-



sented a series of eight specimens of an aquatic snail, *Helisoma* (*Planorbella*) *multivolvis* Case, a species known only from Howe Lake, Marquette County, Michigan. Gifts of Cuban land-snails and of marine shells were received from Dr. Jeanne S. Schwengel, of Scarsdale, New York. The world-wide collection presented by Dr. Orlando Park, of Northwestern University, amounts to some 8,000 specimens and includes marine shells collected by the United States Exploring Expedition of 1832-42 and Palestinian land-shells from the material collected by the late Reverend H. B. Tristram, famous for his zoological studies in the Mediterranean region.

### Care of the Collections—Zoology

The rearrangement and boxing of the large skulls of mammals stored on the fourth-floor gallery was completed during the year by the Division of Mammals. As in previous years the work of Tanner Dominick Villa has been of the greatest importance in the care of the collections of large and medium-sized mammals. Extensive rearrangement of the collections in the Division of Birds was made possible by the use of steel cases that had been vacated by the Division of Amphibians and Reptiles. These were provided with diaphragms and drawers, and the result is much greater accessibility of the whole collection of nonpasserine birds, in which the game-bird collections have been integrated with those of the late Boardman Conover, Trustee and Research Associate, in the Conover Room. The preliminary identifications of various collections by Mrs. Ellen T. Smith, Associate, and Richard Duffey, volunteer, have been of great value in the arrangement of incoming material for the research collections of birds.

In the Division of Amphibians and Reptiles the vital task of examining the entire collection to guard against unnoticed evaporation was completed by Assistant Marx, a time-consuming routine chore on which depends the life of the collection. Corresponding attention to the collections of the Division of Fishes was given by Assistant Pearl Sonoda, who was aided during part of the year by Miss Susan Montague, Antioch College student. During the summer Carlos Bumzahem, an assistant, finished processing the Bishop Collection of amphibians and reptiles, which is now completely integrated with our collection.

In the Division of Insects, Curator Emeritus Gerhard completed the transfer of the butterflies and moths of the Strecker Collection into steel-case storage trays, and complete fumigation of this collec-

tion was undertaken. The incorporation of the Gerhard Collection of true bugs (see page 61) into Museum drawers and cabinets has been begun. August Ziemer, Assistant, continued to collate the collections of North American moths, prepared many thousands of insects for study, and, with some assistance, lined about two thousand insect-traps with cork for use in the collections. Research Associate Seevers continued the transfer of the Bernhauer Collection of staphylinid beetles into Museum drawers and cabinets, and Research Associate Alex K. Wyatt spent much time in sorting the moths and butterflies of the McElhose Collection (see page 61), culling out poor specimens so that the collection could be accessioned. The acquisition of the Ferris Collection, mainly of small land-snails (see page 61), threw an unusual burden of routine work on the Division of Lower Invertebrates. In the arrangement of this ma-

The new habitat group of Malay tapirs in William V. Kelley Hall was unveiled on Members' Night by Rush Watkins, who collected the specimens in Siam (see text).





terial Curator Haas was aided by Miss Patricia Borden, a summer assistant, and by the part-time work of George Johnston, Glenn Keldsen, and Fred Menning, Antioch College students, who also assisted in care of other collections of the department.

## Exhibits—Zoology

The habitat group of Malay tapirs, occupying one of the two remaining spaces in William V. Kelley Hall (Hall 17, Asiatic Mammals), was first shown to the public at a special ceremony on Members' Night by Rush Watkins, of Chicago, a Contributor of the Museum (see page 29). The two fine specimens and material for the exhibit were obtained in 1949 by the Rush Watkins Zoological Expedition to Siam, in which Mr. Watkins, Curator Sanborn, and Taxidermist Frank C. Wonder participated. The animals were prepared for exhibition by Taxidermist Leon L. Walters by his own cellulose-acetate method, the background was painted by Douglas E. Tibbitts, Staff Illustrator, and groundwork and accessories were prepared and installed by Taxidermists Carl W. Cotton, Ronald J. Lambert, and Wonder.

Taxidermist Cotton continued his work on the synoptic series of birds of the world for Boardman Conover Hall (Hall 21, Birds in Systematic Arrangement) and experimented with two exhibits involving mechanical changes of lighting and scene—one to show to advantage the iridescence of the plumage of hummingbirds, the other to show the seasonal color-change from summer brown to winter white in the ptarmigan. An exhibit illustrating the biology of monotremes and marsupials (Hall 15, Mammals in Systematic Arrangement) was prepared by Artist Joseph B. Krstolich under the direction of Curator Davis, and work was begun on a similar exhibit for the edentates. Installation in Albert W. Harris Hall (Hall 18, Reptiles, Amphibians, and Insects) of an exhibit of frogs of the world was completed by Taxidermist Lambert, and work on an exhibit of boas and pythons was well advanced at the end of the year. A special exhibit for Members' Night, "The 'Why' of Museum Insect Collections," prepared by Curator Wenzel and Miss Margaret G. Bradbury, Artist, remained on display in Stanley Field Hall through October and November and was found suitable for permanent exhibition in Hall 18. The exhibit consists of an expository case with four divisions (see pages 82 and 83 for two of the divisions). Supplementary cases on Members' Night contained drawers of specimens and other illustrative material.

## LIBRARY OF THE MUSEUM

The objective of the Library of the Museum is to accumulate and maintain a collection that contributes to the effectiveness of the scientific research and investigation done in the Museum. To keep pace with the increasing demands of the Museum's research program, the Library must acquire promptly after publication all books and periodicals that represent the product of systematic studies in the Museum's specialized divisions and make this literature accessible to the scientific staff and their colleagues. Inasmuch as the importance of a library is not indicated by its size but by the manner in which and the extent to which it is used, additions to the Museum's Library are selected on the basis of fitness rather than number of volumes.

The Library during the year obtained by purchase, gift, and exchange 2,048 volumes, bringing the size of the total collection to approximately 145,900 volumes. Following the pattern of past years, serials continued to form the major part of the acquisitions. Approximately 1,900 serial publications are received currently through exchange. Extensive as the exchange is, the Library still finds it necessary to subscribe for an additional 331 journals that are not available by exchange.

The Library's program for acquisition is based largely on an extensive system of exchange agreements with allied societies, institutions, universities, academies, and other organizations throughout the world. In co-operation with the Division of Publications, the Library continued during the past year to review agreements for exchange of publications made before 1947. Negotiations for many new important exchanges, both domestic and foreign, have been satisfactorily completed. Special consideration has been given to reopening exchanges with institutions in some of the countries behind the Iron Curtain, exchanges that have been suspended since the war years. Also, the postwar years have enabled many scientific societies to reorganize. The Library has endeavored to keep abreast of these developments so that the journals now resuming publication may be incorporated into the Library's records and important new serials may be obtained.

Some of the Library's most important items are gifts that have been received over the years. This year, too, the collection has been augmented by valuable contributions. Representative of the significant gifts received during the year are the many volumes on entomology contributed by William J. Gerhard, Curator Emeritus in the Museum's Division of Insects. Dr. Karl P. Schmidt, Chief

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Curator of Zoology, continued his practice of contributing many volumes from his private collection to the General Library. The Library's holdings were further notably increased by the generosity and courtesy of the donors whose names appear on page 101. Grateful acknowledgement is made for their interest in the Museum as shown by the thoughtfulness of their gifts.

The cataloguing division reports that 3,871 volumes were classified and 17,254 cards were made for the general and departmental catalogues. Of the approximately 145,900 volumes in the collection, 44,864 now are under the Library of Congress system of classification. These volumes are represented in the new section of the general catalogue by a total of 121,269 cards. An additional 1,690 cards for monographs were filed in the general catalogue, which has been divided into two sections that have separate uses. At the close of the year, 298 volumes had been withdrawn under reclassification and by weeding out obsolete and otherwise useless material. In accordance with the Library's policy of keeping its collection to a minimum, unneeded duplicates were withdrawn to be sold or exchanged with other institutions for more desirable material.

There has been a significant new development in the cataloguing division because of the work begun on the cataloguing and classification of the Library's collection of anthropological literature on the Far East, particularly China, consisting of writings in both Oriental and Occidental languages. Our East Asian Collection consists of two main parts: (1) the general collection and (2) the Laufer Collection, bequeathed to the Museum in 1934 by the late Dr. Berthold Laufer, former Chief Curator of the Department of Anthropology. The general collection, which encompasses the major portion of the literature on East Asia, includes the main corpus of standard books in Occidental and Oriental languages. The Laufer

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At the left is reproduced a page from 廣金石韻府 (Kuang Chin Shih Yun-Fu), a six-volume seventeenth-century work composed by 林尚葵 (Lin Shang-k'uei) in expansion of an earlier work by Chu Shih-wang. The book, a wood-block edition in two colors, illustrates varying styles of early Chinese characters as found on ancient bronze vessels and stone tablets. The encircled modern forms are placed in the traditional rhyme system, with the variant archaic forms, each accompanied by a statement of its source, listed below. The Museum's collection of titles in Oriental languages in content spans the fields of anthropology and Sinology and in date includes editions of the Ming, Ch'ing, and post-dynastic periods.



Collection of works in Oriental languages, mainly Chinese, is a small but select collection of some thousands of volumes dealing with diverse fields relevant to anthropology and Sinology. The already wide range and diversity of the general collection is being augmented by acquisition of older publications and those currently published, thereby bringing this material up to date on the languages, peoples, geography, and history of the Far East. As an effective tool for research the general collection will complement the Laufer Collection. M. Kenneth Starr, Curator of Asiatic Archaeology and Ethnology, and the Library staff are exercising great care in the co-ordination and arrangement of these valuable books and in the application of methods for their preservation. In order that the collection should be readily available for Curator Starr's research, a room has been provided for it in the anthropology area adjacent to his own office.

Integration of publications in the Far Eastern languages into the Library's collection and classification scheme presented numerous problems. The first step was to secure the services of a scholar who had not only a knowledge of present-day Chinese characters but who also could interpret the many changes Chinese characters have undergone from their earliest inscriptions, and thus in January, 1954, Dr. Hoshien Tchen was appointed Technical Adviser for the Oriental Collection.

Before the actual work of organizing the material could be undertaken, a study was made of the systems adopted by different libraries in the United States housing major collections similar in nature, and consultations were held with the head of the cataloguing division of the Library of Congress and with Tsuen-Hsuei Tsien, Librarian of the Far Eastern Library of the University of Chicago. Upon further deliberation with Dr. Tchen, Curator Starr, Mrs. Meta P. Howell, Librarian of the Museum, and Mrs. M. Eileen Rocourt of the Library's cataloguing division, it was decided to conform partially to the procedure in use in the Museum Library, although this method would necessitate some minor changes in certain sections of the Library of Congress classification schedules to permit the incorporation of this collection into the Library's shelf-list. The romanization of the titles and names of authors follows the standard pronunciation of the original language.

After an experimental stage, actual cataloguing of the collection began in May, 1954. By the end of October, 320 titles in about 1,200 volumes had been catalogued. This is a singular accomplishment in view of the fact that these figures do not include the new acquisitions published in the Far Eastern languages that have been catalogued concurrently with the work on the Oriental Collection.



Interlibrary-loan service, which is one of the Library's major activities, is considered important to research, and grateful acknowledgement is made to all the libraries that have so courteously served the Museum Library. The many books borrowed and lent during the year can show only a fraction of the activities in the reference division, and there has been an annual increase in reader-attendance and inquiries by telephone. The binding program resulted in the binding or rehabilitation of 1,274 volumes. In the stackrooms many of the shelves had become overcrowded because of shifting of material caused by reclassification, and, as the year closed, the work of rearrangement was almost completed in two of the three stackrooms in the General Library. Clerical activity is one of the most substantial operations in the Library. Of the 13,571 pieces of mail received during the course of the year (journals and correspondence, exclusive of books), 7,824 items were recorded on the Kardex. Additionally, 171 letters were translated into English from the French, German, and Spanish languages. During part of the year the Library was assisted in its clerical work by Miss Ruth Florin, Antioch College student.

## MOTION PICTURES

John W. Moyer, Chief of the Division of Motion Pictures, returned to his duties on the first of August after an extended leave of absence during which he had served as Consul of the United States to India, with headquarters in Calcutta. During the year three motion-picture productions were edited, titled, and completed for use: "To a New 'Lost World,' " from footage taken in 1953 by Dr. Julian A. Steyermark, Curator of the Phanerogamic Herbarium, on his expedition to Venezuela; "Marsh Birds of the Upper Nile," from footage taken in 1953 on the expedition to East Africa led by Walther Buchen, Trustee of the Museum; and "Life Histories of the Cecropia and Polyphemus Moths," made up from footage from the Museum's Film Library. A film to be titled "Indians of the Chicago Region" is being prepared. The films in the Museum's increasing collection are used extensively by Raymond Foundation in its educational work, but they also are on constant loan to organizations of all kinds and, lately, to television stations. During the last part of the year a complete change in the storage of all films was undertaken, a check was made of all accessions, and our catalogue of film-subjects was brought up to date. The normal care of motion-picture film requires continuous work to keep films in first-class condition.

## PHOTOGRAPHY AND ILLUSTRATION

The Division of Photography made during the year a total of 24,135 negatives, prints, enlargements, and lantern slides for the Museum, other institutions, the press, and general sales. In the Division of Illustration, material was prepared for the departments and divisions of the Museum throughout the year by Douglas E. Tibbitts, Staff Illustrator, who was ably assisted during the summer months by Wendell Hall, a student. The background for the habitat group of Malay tapirs was completed by Mr. Tibbitts (see pages 29 and 64). Illustrations for two series of "Museum Stories" (Raymond Foundation) and for Curator Patterson's study of early Cretaceous mammals were made, and lettering, retouching of photographs, designs, and map revisions were done for scientific and miscellaneous publications.

## PUBLIC RELATIONS

Every opportunity was used throughout the year to inform the public of the Museum's diverse activities and functions and to attract visitors to take advantage of its educational and entertainment facilities. Daily newspapers, national press-services, magazines, radio and television stations and networks, and other information channels all co-operated generously in promoting interest.

Direct publicity releases issued through the Division of Public Relations, many accompanied by photographs, reached a total of 341. In many instances these releases, which were widely published approximately as prepared in Museum copy, stimulated editors to assign their own staff reporters and photographers to follow up with special articles and broader pictorial coverage. Similarly, the news departments and program directors of television and radio stations frequently find in a news release the stimulus for development of a special program. Thus a story released by the Museum often results in a multitude of presentations in print and on the air, frequently from coast to coast and even internationally. An additional source of publicity is the Museum's monthly *Bulletin* which, although published primarily for the information of Members of the Museum, is circulated to newspapers and news agencies.

The overwhelming demands upon the limited space of all newspapers for adequate coverage of world events and also for promotion of thousands of civic institutions and other good projects often cause the press unintentionally to neglect or "underplay" worthwhile cultural undertakings. Special tribute is therefore paid to the

editorial discretion of executives of the *Philadelphia Inquirer* for using their pages (November 7 issue) to present one of the most impressive features ever published about this Museum. For this, two entire pages of the Sunday "Colorama" section were devoted to pictures in color of four of the dioramas of marine invertebrate life in Frederick J. V. Skiff Hall (these dioramas in Hall 37 are restorations showing life of hundreds of millions of years ago). The picture of each diorama was unusually large (one-half page), and the reproductions were remarkable for their fineness of detail and faithfulness to the colors of the original exhibits. Informative captions accompanied each picture. The result was not only a gratifying testimonial to the effectiveness of work done at this Museum but was also an outstanding example of newspaper enterprise in an educational field. It is pleasing to note that the editors have indicated their intention of publishing a similar double-page layout of four more of the dioramas early in 1955.

For co-operation in publicizing the Museum grateful acknowledgment is made especially to all four members of Chicago's metropolitan daily press—*Daily News*, *Tribune*, *Sun-Times*, and *American*. Press services that contributed greatly to the spread of information from the Museum include the City News Bureau of Chicago, Associated Press, United Press, International News Service, International News Photos, and Science Service. Some two hundred neighborhood, suburban, and foreign-language publications also devoted generous space to Museum activities. In the fields of television and radio communication, the Museum is indebted for cordial co-operation to all the following: National Broadcasting Company and its local stations, WNBQ(TV) and WMAQ; Columbia Broadcasting System with WBBM and WBBM-TV; Dumont Television Network with WGN-TV; Mutual Broadcasting System and WGN (radio); American Broadcasting Company—Paramount Theaters, Inc., with WLS and WBKB(TV). Also the Museum acknowledges the friendly services of many independent local radio stations, including WIND, WJJD, WAIT, WAAF, WFMT, WFMF, WFJL, WEDC, WEAW, WCRW, WCFL, WBIK, WSBC, WOPA, WNMP, WLEY, WHIP, WHFC, WXRT, WGES, and WMBI.

For the display in stations and passenger coaches of placards advertising the lectures for adults provided by the Edward E. Ayer Lecture Foundation Fund and the programs for children presented by Raymond Foundation, the Museum acknowledges the courtesy, which has now been extended for many years, of Chicago Aurora and Elgin Railroad, Illinois Central System, Chicago and North Western Railway, and Chicago Transit Authority.

## PUBLICATIONS AND PRINTING

Distribution of publications of the Museum through exchange with other institutions and individual scientists throughout the world continued as the principal activity of the Division of Publications (see page 65), and during the year 12,501 publications were sent out. Since the major portion of the recipients are in foreign countries, the assistance of the International Exchange Service of the Smithsonian Institution in forwarding our parcels from Washington, D.C., to their final destinations is of great importance to our publication program. The Museum thanks the International Exchange Service for its many years of co-operation in this endeavor. Sales of Museum publications totaled 50,201 copies, approximately one-half of which were copies of our *General Guide*. The sale of color transparencies of Museum exhibits was expanded by the addition of new subjects, and 2,298 slides were sold during the year.

The Museum printed during the year seventeen publications in its scientific series, two (reprints) in its popular series, two handbooks, and one annual report. The total number of copies printed was 43,381, with a total of 1,921 pages of type composition. Twelve numbers of Chicago Natural History Museum *Bulletin* were printed, averaging 6,250 copies an issue. Other work by letterpress included posters, price lists, lecture schedules, programs, Museum labels, post cards, Museum stationery, and specimens tags, totaling 802,957 impressions. Two series of Museum Stories, "Spices" and "Small Living Things" (written by members of Raymond Foundation), and miscellaneous work printed by the Vari-type-offset process during the year totaled 254,699 impressions.

The following publications were issued by Chicago Natural History Museum during 1954:

### DEPARTMENT OF ANTHROPOLOGY

BRAIDWOOD, ROBERT J.

*Prehistoric Men*, Popular Series, Anthropology, no. 37, 122 pages, 31 illustrations (reprint)

KROEBER, A. L.

*Proto-Lima, a Middle Period Culture of Peru*; with Appendix: Cloths, by Dwight T. Wallace, Fieldiana: Anthropology, vol. 44, no. 1, 157 pages, 94 illustrations

MARTIN, PAUL S., JOHN B. RINALDO, AND ELAINE BLUHM

*Caves of the Reserve Area*, Fieldiana: Anthropology, vol. 42, 227 pages, 102 illustrations



QUIMBY, GEORGE I.

*Indians of the Western Frontier, Paintings of George Catlin*, Handbook, 78 pages, 35 illustrations

SPOEHR, ALEXANDER

*Saipan, the Ethnology of a War-Devastated Island*, Fieldiana: Anthropology, vol. 41, 383 pages, 32 illustrations

THOMPSON, J. ERIC S.

*The Civilization of the Mayas*, Popular Series, Anthropology, no. 25, 96 pages, 36 illustrations (reprint)

#### DEPARTMENT OF BOTANY

SHERFF, EARL EDWARD

*Revision of the Genus Cheirodendron Nutt. Ex Seem. for the Hawaiian Islands*, Fieldiana: Botany, vol. 29, no. 1, 45 pages

#### DEPARTMENT OF GEOLOGY

OLSON, EVERETT CLAIR

*Fauna of the Vale and Choza: 7; Pelycosauria: Family Caseidae*, Fieldiana: Geology, vol. 10, no. 17, 12 pages, 4 illustrations

Eight-year-old artist shows his drawing of swordfish beside the model in Hall O (art schools of Chicago hold regular sketching classes in the halls of the Museum).





## DEPARTMENT OF GEOLOGY (continued)

OLSON, EVERETT CLAIR (continued)

*Fauna of the Vale and Choza: 8; Pelycosauria: Dimetrodon*, Fieldiana: Geology, vol. 10, no. 18, 6 pages

*Fauna of the Vale and Choza: 9; Captorhinomorpha*, Fieldiana: Geology, vol. 10, no. 19, 8 pages, 2 illustrations

RICHARDSON, EUGENE S., JR.

*Note on an Eocene Crab, Harpactocarcinus mississippiensis Rathbun*, Fieldiana: Geology, vol. 10, no. 20, 5 pages, 4 illustrations

## DEPARTMENT OF ZOOLOGY

BROWN, WALTER C.

*Notes on Several Lizards of the Genus Emoia, with Descriptions of New Species from the Solomon Islands*, Fieldiana: Zoology, vol. 34, no. 25, 14 pages, 2 illustrations

INGER, ROBERT F.

*Philippine Zoological Expedition, 1946-1947; Systematics and Zoogeography of Philippine Amphibia*, Fieldiana: Zoology, vol. 33, no. 4, 351 pages, 71 illustrations

MITCHELL, RODGER D.

*Check List of North American Water-Mites*, Fieldiana: Zoology, vol. 35, no. 3, 44 pages

RADFORD, CHARLES D.

*A New Larval Mite from Eritrea (Acarina: Trombiculidae)*, Fieldiana: Zoology, vol. 34, no. 29, 4 pages, 4 illustrations

*Some Mites of Yemen, Collected by the Medical Mission of the United States Naval Medical Research Unit No. 3*, Fieldiana: Zoology, vol. 34, no. 28, 19 pages, 13 illustrations

RAND, AUSTIN L.

*Social Feeding Behavior of Birds*, Fieldiana: Zoology, vol. 36, no. 1, 71 pages, 3 illustrations

RAND, AUSTIN L., AND EMMET R. BLAKE

*Birds the World Over, As Shown in Habitat Groups in Chicago Natural History Museum*, Handbook, 96 pages, 46 illustrations (7 in color)

SANBORN, COLIN CAMPBELL

*Bats from Chimantá-tepui, Venezuela, with Remarks on Choeroniscus*, Fieldiana: Zoology, vol. 34, no. 27, 5 pages

SCHMIDT, KARL P.

*Notes on Frogs of the Genus Telmatobius, with Descriptions of Two New Peruvian Species*, Fieldiana: Zoology, vol. 34, no. 26, 11 pages, 1 illustration

*The Annellated Coral Snake, Micrurus annellatus Peters*, Fieldiana: Zoology, vol. 34, no. 30, 7 pages, 2 illustrations

## ADMINISTRATIVE PUBLICATIONS

*Report of the Director to the Board of Trustees for the Year 1953*, 139 pages, 24 illustrations

## ACTIVITIES OF STAFF MEMBERS IN SCIENTIFIC SOCIETIES

Dr. Donald Collier, Curator of South American Archaeology and Ethnology, and George I. Quimby, Curator of North American Archaeology and Ethnology, attended the annual meetings in Detroit of the American Anthropological Association, the annual meeting in Albany, New York, of the Society for American Archaeology, and the annual meeting at Purdue University of the Central States Anthropological Society (Curator Collier was president of this society and Curator Quimby was elected a member of its executive board). Curator Collier was a discussion leader in a conference on museums and archaeology at the University Museum in Philadelphia sponsored by the American Anthropological Association and the Wenner-Gren Foundation for Anthropological Research. Dr. John B. Rinaldo, Assistant Curator of Archaeology, attended the concurrent meetings of the Pecos Conference on Southwestern Archaeology and the Great Basin Conference on Archaeology held in Globe, Arizona, at Southwestern National Monuments headquarters.

Dr. Theodor Just, Chief Curator of Botany, was elected vice-president of the Society for the Study of Evolution and continued to serve as chairman of the Committee on Paleobotany, Division of Earth Sciences, National Research Council. He participated as a discussion leader in a symposium at Missouri Botanical Garden on the role of systematics in modern biology. During the summer he attended the Eighth International Botanical Congress in Paris as the official representative of the Museum (see page 79 for titles of papers read), where he was appointed a member of two committees—the Committee on Generic Synopses (*Genera Plantarum*) and the Committee for Paleobotanical Nomenclature—and presided at a symposium on the origin and evolution of angiosperms. Dr. José Cuatrecasas, formerly Curator of Colombian Botany, also attended this congress (see page 78 for titles of papers read). Paul C. Standley, Curator Emeritus of the Phanerogamic Herbarium, who now lives in Honduras, was appointed by the President of Honduras as technical adviser *ad honorem* in the botany department of the Ministry of Agriculture of Honduras. In recognition of her botanical studies in Mexico and Central America, Dr. Margery C. Carlson, Associate in Botany, was selected as the third recipient of the Sarah Gildersleeve Fife Award, given by the Garden Club of America.

Dr. Karl P. Schmidt, Chief Curator of Zoology, attended the meetings held at the University of Florida of the Society for the Study of Evolution, of which he was president. The concurrent

meetings of the American Society of Ichthyologists and Herpetologists were attended by Dr. Robert F. Inger, Curator of Amphibians and Reptiles, and Loren P. Woods, Curator of Fishes. Chief Curator Schmidt attended also the meeting of the board of governors of that society and of the committee on common names of the Herpetological Branch. He was elected an Honorary Fellow by the Indian Academy of Zoology, of Agra, India. Colin Campbell Sanborn, Curator of Mammals, and Philip Hershkovitz, Associate Curator, attended the meetings of the American Society of Mammalogists held in Estes Park, at which Curator Sanborn was elected a trustee and appointed chairman of the committee on nomenclature. Dr. Austin L. Rand, Curator of Birds, represented the Museum at the Eleventh International Ornithological Congress in Basel, Switzerland, and continues as a member of the International Committee, the governing board for the International Ornithological Congresses. Emmet R. Blake, Associate Curator of Birds, Dr. R. M. Strong, Research Associate in the Division of Vertebrate Anatomy, and Curator Rand attended the meetings of the American Ornithologists' Union at the University of Wisconsin. Curator Woods, Miss Pearl Sonoda, Assistant in the Division of Fishes, and Miss Margaret G. Bradbury, Artist in the Department of Zoology, attended the meetings of the Illinois Academy of Science in Monmouth. Rupert L. Wenzel, Curator of Insects, who attended the meetings in Houston of the Entomological Society of America, was appointed to the society's committee on professional status and standards. He served also on the committee that arranged for the celebration in Illinois of the centennial of official entomology. Henry S. Dybas, Associate Curator of Insects, attended the meetings in Omaha of the North Central Branch of the Entomological Society of America. On the return trip from his expedition in Israel, Dr. Fritz Haas, Curator of Lower Invertebrates, was awarded, in recognition of his scientific achievements, the Jacob Cretzschmar Medal at a special session of the Senckenberg Natural History Society in Frankfurt-am-Main, Germany (he is the first scientist to receive this medal).

Miss Miriam Wood, Chief of the James Nelson and Anna Louise Raymond Foundation, attended meetings of the American Association of Museums in Santa Barbara, California, at which she was chairman of the Children's Museums Section; Midwest Conference of Museums in Detroit; National Conference of Audio-Visual Instruction of the National Education Association in Chicago, during which she participated in a discussion of museums as school resource-centers; and Adult Education Conference in De Kalb, Illinois, for which she was "resource leader" on the topic "Museums and



Celestino Kalinowski, Assistant Taxidermist, with his balsa raft on the Madre de Dios River in southeastern Peru, collects specimens for the Museum collections.

Adult-Education Programs." Miss Wood and Miss Harriet Smith, Guide-Lecturer of Raymond Foundation, attended the meetings in Chicago of the Educational Film Library Association, where they contributed to a special discussion on local production-techniques. Mrs. Meta P. Howell, Librarian of the Museum, and Mrs. M. Eileen Roucourt, of the Library staff, attended the Annual Mid-western Conference of the American Library Association. John M. Millar, Deputy Director of the Museum, attended the Midwest Conference of Museums in Detroit, where he was elected vice-president of the association.

Chief Curator Just continued as editor of *Lloydia* (quarterly journal of biological science published by Lloyd Library and Museum, Cincinnati) and of *Paleobotanical Report* (published by the Division of Earth Sciences of the National Research Council). Dr. Rainer Zangerl, Curator of Fossil Reptiles, continued as foreign-news editor and Assistant Priscilla F. Turnbull as a regional editor of the *Society of Vertebrate Paleontology News Bulletin*. Chief Curator Schmidt continued as a section editor of *Biological Abstracts*.

Publications of members of the scientific staff during 1954 besides those issued by Chicago Natural History Museum include the following articles and reviews in various journals:



## DEPARTMENT OF ANTHROPOLOGY

COLLIER, DONALD

"The Role of Museums in American Anthropology," *American Anthropologist*, vol. 56, no. 5, pt. 1, pp. 768-779 [with Harry Tschopik, Jr.]

Review of *Investigaciones Arqueológicas en la Sabana de Bogotá, Colombia: Culture Chibcha* (by Emil W. Haury and Julio Cesar Cubillos), in *American Anthropologist*, vol. 56, no. 5, pt. 1, p. 922

MARTIN, PAUL S.

"Comments on Rouse's Article on the Area Co-Tradition," *American Antiquity*, vol. 20, no. 2, p. 160

"Comments on *Southwestern Archeology, Its History and Theory*" (by Walter W. Taylor), *American Anthropologist*, vol. 56, no. 4, pt. 1, pp. 570-572

"Mogollon Culture in Western New Mexico," *Southwestern Lore*, vol. 20, no. 1, pp. 1-4

QUIMBY, GEORGE I.

"Comments on Time Depths of American Linguistic Groupings," *American Anthropologist*, vol. 56, no. 3, p. 364

"Cultural and Natural Areas before Kroeber," *American Antiquity*, vol. 19, no. 4, pp. 317-331

"The Old Copper Assemblage and Extinct Animals," *American Antiquity*, vol. 20, no. 2, pp. 169-170

RINALDO, JOHN B.

Review of *Field Archaeology* (by R. J. C. Atkinson), in *American Anthropologist*, vol. 56, no. 3, p. 522

Review of *Woodchuck Cave, a Basketmaker II Site in Tsegi Canyon, Arizona* (by H. Claiborne Lockett and Lyndon L. Hargrave), in *American Antiquity*, vol. 20, no. 2, pp. 183-184

## DEPARTMENT OF BOTANY

CUATRECASAS, JOSÉ

"Disertaciones Sobre Bombacaceae," *Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales*, vol. 9, pp. 164-177

"Distribution of the Genus *Espeletia*," *Huitième Congrès International de Botanique Paris 1954, Rapports et Communications*, section 4, pp. 131-132

"Dos Moraceas y dos Compuestas Nuevas de Venezuela," *Boletín de la Sociedad de Ciencias Naturales*, vol. 15, pp. 107-111

"El Género *Mniodes*," *Folia Biologica Andina*, vol. 1, pp. 1-7

"Estudios Sobre Plantas Andinas," *Mutisia (Acta Botanica Colombiana)*, no. 19, pp. 1-9

"Five New Species of *Brunellia*," *Phytologia*, vol. 4, no. 8, pp. 481-485

"New Species of Compositae from Ecuador, Collected by W. H. Camp," *Brittonia*, vol. 8, pp. 39-49

"Notas a la Flora de Colombia," *Revista de la Academia Colombiana de Ciencias Exactas, Físicas y Naturales*, vol. 9, pp. 233-249

"Nouvelles Composées de l'Amerique du Sud," *Bulletin de la Société Botanique de France*, vol. 101, pp. 242-246

"Novelties in the Bombacaceae," *Phytologia*, vol. 4, no. 8, pp. 481-485

"Outline of Vegetation Types in Colombia," *Huitième Congrès International de Botanique Paris 1954, Rapports et Communications*, section 7, pp. 77-78

"Synopsis der Gattung *Loricaria* Wedd.," *Repertorium Specierum Novarum Regni Vegetabilis*, vol. 2, no. 56, pp. 149-172



DROUET, FRANCIS

"Natural History of Plummers Island, Maryland, XI. Blue-green Algae (Myxophyceae)," *Proceedings of the Biological Society of Washington*, vol. 67, pp. 239-242

"Parasitization by Fungi in the Coccoid Myxophyceae," *Huitième Congrès International de Botanique Paris 1954, Rapports et Communications*, section 17, pp. 48-49

JUST, THEODOR

"Generic Synopses and Their Role in Modern Botanical Research," *Taxon*, vol. 3, no. 7, pp. 201-202

"Modern Systems of Classification of the Plant Kingdom," *Huitième Congrès International de Botanique Paris 1954, Rapports et Communications*, section 2, p. 1

"Origin and Development of Botanical Museums," *Huitième Congrès International de Botanique Paris 1954, Rapports et Communications*, section 26, p. 218

"The Paleobotanical Approach to the Problem of the Origin and Evolution of Angiosperms," *Huitième Congrès International de Botanique Paris 1954, Rapports et Communications* [awaiting publication]

SHERFF, EARL EDWARD

"Further Notes upon the Flora of the Hawaiian Islands," in *Botanical Leaflets* (published by the author), no. 9, pp. 2-10

"Notes on Certain Coreopsidae (Bidens L. and Coreopsis L.) of Mexico and Southeastern Africa," in *Botanical Leaflets* (published by the author), no. 9, pp. 10-14

"Two Additions to the Genus Bidens (fam. Compositae) from Africa," *American Journal of Botany*, vol. 41, no. 9, pp. 762-763

STEYERMARK, JULIAN A.

"Columnea stenophylla," *The National Horticultural Magazine*, vol. 33, no. 3, pp. 212-215

"Longevity of Some Botrychium Species," *American Fern Journal*, vol. 44, no. 3, pp. 108-111

"Notes on Some Roses in the Gray's Manual Range," *Rhodora*, vol. 56, no. 664, pp. 70-79

"Una Nueva Especie de Ilex de Venezuela," *Boletín de la Sociedad Venezolana de Ciencias Naturales*, vol. 15, no. 82, pp. 176-178

"Una Nueva Especie de Sickingia en Venezuela," *Boletín de la Sociedad Venezolana de Ciencias Naturales*, vol. 15, no. 81, pp. 112-113

"Underwater Orchid," *The Aquarium*, vol. 23, no. 1, pp. 26-27

THIERET, JOHN W.

"The Tribes and Genera of Central American Scrophulariaceae," *Ceiba*, vol. 4, no. 3, pp. 164-184

## DEPARTMENT OF GEOLOGY

PATTERSON, BRYAN

"The Geologic History of Non-Hominid Primates in the Old World," *Human Biology*, vol. 26, no. 3, pp. 191-209

RICHARDSON, EUGENE S., JR.

*A Bibliography of the Conularida (Bulletins of American Paleontology, volume 34, number 145), 143 pages* [with G. Winston Sinclair]

"Pennsylvanian Insects of Illinois," *Transactions of the Illinois State Academy of Science*, vol. 46, pp. 147-153

DEPARTMENT OF GEOLOGY (*continued*)

ROY, SHARAT K., AND ROBERT K. WYANT

"Caliza de Agua Dulce de Valle de Torola al Noreste de El Salvador," *Comunicaciones del Instituto Tropical de Investigaciones Cientificas de la Universidad de El Salvador*, vol. 3, nos. 2-3, pp. 99-106

DEPARTMENT OF ZOOLOGY

DAVIS, D. DWIGHT

"Primate Evolution from the Viewpoint of Comparative Anatomy," *Human Biology*, vol. 26, pp. 211-219

HAAS, FRITZ

"Non-Marine Mollusks from the Pacific Slope of North America," *Nautilus*, vol. 68, pp. 94-96

"Some Marine Shells from the Persian Gulf," *Nautilus*, vol. 68, pp. 46-47

"Zur Anatomie und Entwicklungsgeschichte einiger äthiopischer und sud-amerikanischer Unionazeen," *Archiv für Molluskenkunde*, vol. 83, pp. 89-90

HERSHKOVITZ, PHILIP

"Mammals of Northern Colombia, Preliminary Report No. 7: Tapirs (Genus *Tapirus*), with a Systematic Review of American Species," *Proceedings of the United States National Museum*, vol. 103, pp. 465-496, 5 illustrations

INGER, ROBERT F.

"On a Collection of Amphibians from Mount Kina Balu, North Borneo," *Journal of the Washington Academy of Sciences*, vol. 44, pp. 250-251

RAND, AUSTIN L.

"A Philippine Kingfisher (*Halcyon coromanda* Latham) Uses a Tool," *Silliman Journal*, vol. 1, pp. 83-85

"Immature Females with Adult Male Characters," *The Auk*, vol. 71, pp. 474-475

"Notes on Downy Plumages of Loons (Gaviidae)," *The Canadian Field-Naturalist*, vol. 68, pp. 13-15

"On the Spurs on Birds' Wings," *The Wilson Bulletin*, vol. 66, pp. 127-134

"The Ice Age and Mammal Speciation," *Arctic*, vol. 7, pp. 31-35

SANBORN, COLIN CAMPBELL

"Bats of the United States," *Public Health Reports*, vol. 69, pp. 17-28

"Mammals from the Departments of Cuzco and Puno, Peru," *Publicaciones del Museo de Historia Natural "Javier Prado," Lima, Peru*, Ser. A., Zoologica, no. 12, pp. 1-8

"Weights, Measurements, and Color of the Chilean Forest Puma," *Journal of Mammalogy*, vol. 35, pp. 126-128

SCHMIDT, KARL P.

"Fifteenth International Congress of Zoology, 1953," *Science*, vol. 119, pp. 114-115

"J. E. Johnson, Jr.—An Appreciation," *Copeia*, 1954, no. 3, pp. 247-248

"Omissions from the Sixth Edition of the *Check List of North American Amphibians and Reptiles*," *Copeia*, 1954, no. 4, pp. 304-306

"Reports of the Lund University Chile Expedition 1948-1949, 13. Amphibia Salientia," *Lunds Universitets Arsskrift*, n.f., part 2, vol. 49, pp. 1-6

WOODS, LOREN P.

*Fishes of the Marshall and Mariana Islands (United States National Museum Bulletin 202)*, volume 1, xxxii+685 pages, 74 plates, 90 text figures [with Leonard P. Schultz and collaborators]

## CO-OPERATION WITH OTHER INSTITUTIONS

In 1953 the Department of Anthropology of the Museum and the Department of Anthropology of the University of Chicago joined with Newberry Library, of Chicago, in representing to the Carnegie Corporation of New York the need for a center in Chicago for the study of the society and culture of the Philippine Islands, with the purpose of eventually assessing more closely the part played by the United States in their westernization and modern development. The Carnegie Corporation then granted a total of \$75,000 over a five-year period for support of the proposal, which was organized late in 1953 under the name "Philippine Studies Program." Dr. Fred Eggan, of the University of Chicago, is the director, and Evett D. Hester, who holds the Thomas J. Dee Fellowship in Anthropology at the Museum, serves as associate director. The Philippine Studies Program has started, under the supervision of Mrs. Ruth Lapham Butler, Custodian of the Ayer Collection at Newberry Library, with the calendaring by Dr. Paul Lietz, of Loyola University, of Newberry Library's extensive collection of Philippine manuscripts, the researches by Dr. John Phelan, presently in Spain, on the role of church in the early Philippines, and the translation of several manuscripts relating to pre-contact situations. The Philippine Studies Program has allotted \$1,000 to the Museum for support of our Pacific Research Laboratory project (see pages 40 and 86).

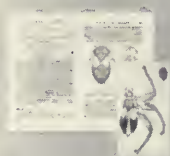
Many scientists from other institutions made use during the year of the research collections and laboratories of the Museum and consulted with members of its scientific staff. Dr. Hans Stübel, professor at Erlangen University, Germany, and a specialist on the aboriginal tribes of China, continued until November his research at the Museum under a Fulbright grant and with the additional aid of a fund generously given to the Museum by a group of donors who wished to support his work (see page 30). In this he utilized the Museum's ethnological collections and library resources, and so was enabled to complete a manuscript on a group of eastern Tibetan nomads, among whom he had done field work. His broad scholarship and his vast knowledge of China were both stimulating and helpful to the staff of the Department of Anthropology. Among others who used the anthropological study-collections were Miss Grace Denny, University of Washington; Dr. Stella Kramrisch and Dr. Schuyler Cammann, University of Pennsylvania; Edgar Kaufmann, Jr., Museum of Modern Art; Dr. Robert T. Hatt, Director, Cranbrook Institute of Science; Dr. Sueji Umehara, Kyoto University, Japan; and Soame Jenyns, British Museum, London.

# THE "WHY" OF MUSEUM INSECT COLLECTIONS



**COLLECTIONS ARE THE BASIS OF  
DESCRIPTION AND CLASSIFICATION**

**DESCRIPTIONS**



**FIELD GUIDES  
AND HANDBOOKS**



**MONOGRAPHS**



**TEXTBOOKS**



An exhibit for Members' Night explains the function of the Museum's research collections, which are vastly greater than those displayed in the exhibition halls.

Botanists who visited the Museum for consultation or study include Ali Mohammed Rawi, Ministry of Agriculture, Baghdad, Iraq; Dr. Albert C. Smith and George Black, United States National Museum; Dr. A. Wolfson, Northwestern University; A. R. Teixeira, São Paulo, Brazil; Dr. Oren C. Durham, Abbott Laboratories, Chicago; Dr. George Cummins, Mr. and Mrs. Joe F. Hennen, and Mr. and Mrs. John Lingappa, Purdue University; Dr. Sidney F. Glassman, University of Illinois (Navy Pier, Chicago); Dr. Robert Scott, Harvard University; Dr. Stanley A. Cain, University of Michigan; Dr. Charles E. Olmsted and Dr. Paul Voth, University of Chicago; Dr. John D. Dwyer, St. Louis University; Eugene Nasir, Gordon College, Rawalpindi, Pakistan; Burdett Green, Fine Hardwoods Association, Chicago; Dr. Bassett Maguire and Dr. John Wurdack, New York Botanical Garden; Dr. George H. Coons, United States Department of Agriculture; Miss Patricia Morrissey, Chicago; Dr. George Forster, Chicago Public Health Institute; Dr. Frederick Plough, American Museum of Natural History; Dr. Dwight Moore, University of Arkansas; Dr. Alison Baird, University





The insect collections, for example, are used in scientific studies that result in technical writings published in the Museum's "Fieldiana" series and elsewhere.

of Western Australia; Dr. James E. Canright, Indiana University; Dr. Edward Press, University of Illinois, School of Medicine; Dr. and Mrs. Rolla M. Tryon, Missouri Botanical Garden; Dr. Manuel Maldonado-Kordell, Instituto Panamericano de Geografía e Historia, Mexico; Mrs. Elizabeth Wagner and A. J. Goldsmith, Chicago; Dr. R. R. Panje, Sugarcane Breeding Institute, Coimbatore, India; Miss Ruth Sokow, Scott Foresman and Company, Chicago; and Dr. Walter Baron, Chemical Abstracts, Columbus, Ohio.

Visitors who came to the Museum for the purpose of examining specimens in the study-collections of the Department of Geology include Dr. A. S. Romer and Dr. Ernest E. Williams, of Harvard University, Dr. Bobb Schaeffer, of the American Museum of Natural History, Dr. David H. Dunkle, of the United States National Museum, and A. G. Edmund, of Royal Ontario Museum of Zoology and Paleontology, Toronto. Shimon R. Angress, a student at the University of Chicago from Israel, spent several months in the paleontology laboratory learning modern techniques of preparation under the supervision of Orville L. Gilpin, Chief Preparator of Fossils.



Scientists who consulted with our zoology staff or spent some time in examination of our zoological collections include Harold C. Hansen, T. E. Moore, Dr. Herbert H. Ross, and Dr. Milton W. Sanderson, Illinois Natural History Survey; Dr. E. L. Du Brul and Dr. D. F. Hoffmeister, University of Illinois; Dr. D. L. Johnson and Dr. Alexander Wetmore, United States National Museum; T. T. Thew, Davenport Museum; Miss Amy Suehiro, Bernice P. Bishop Museum, Honolulu; Alan Solem, Dr. Robert Taylor, and Dr. Josselyn van Tyne, Museum of Zoology, University of Michigan; Dr. Rodger D. Mitchell, University of Vermont; Dr. Rollin Baker, University of Kansas; Dr. W. B. Davis, Texas Agricultural and Mechanical College; Dr. Heinz Felten, Senckenberg Museum, Frankfurt-am-Main, Germany; Dr. Dean Amadon, Dr. Mont Cazier, Dr. Willis J. Gertsch, and Dr. Karl Koopman, American Museum of Natural History; Dr. James Steele, United States Public Health Service; Dr. Paul Davenport, Illinois Public Health Service; Captain Jean Delacour, Los Angeles County Museum; Byron E. Harrell, University of Minnesota; William H. Phelps, Caracas, Venezuela; Dr. Frank A. Pitelka, Museum of Vertebrate Zoology, University of California; Eugene Ray, Chicago; Dr. Orlando Park, Northwestern University; Dr. Dwain W. Warner, Museum of Natural History, University of Minnesota; Dr. Charles G. Sibley, Cornell University; Dr. Fred R. Cagle, Tulane University of Louisiana; Dr. Ernest E. Williams, Harvard University; Dr. Stanley Auerbach and Harry G. Nelson, Roosevelt University; Dr. Joseph Camin, Chicago Academy of Sciences; Dr. Sidney Camras, Chicago; Dr. Ralph Crabill, Washington University (St. Louis); Earl A. Cross, University of Kansas; Dr. David Cook, Wayne University; Dr. Thomas Daggy, Davidson College; William Gillespie, Miami College; Dr. Ivo Poglayen and Dr. Ingeborg Poglayen, University of Vienna, Austria; and Dr. Gerhard W. Teague, Montevideo, Uruguay.

The Reverend Brother Henrano Ginés, director of Sociedad de Ciencias Naturales in Caracas, Venezuela, and professor of biology in the College of La Salle, and Dr. Luis M. Carbonell, an alumnus of the college, visited all the divisions of the Museum to become familiar with our collections and our methods of operation and exhibition. Other visitors who came to observe our operating methods were Nevati Dolunay, director of the Museum of Archaeology in Ankara, Turkey, and Professor Yasushi Hoshino, of the Tokyo Institute of Technology and the Museum of Japan. The Reverend Brother Gilberto Fabian, professor of laws at the National University of Colombia, examined, in behalf of the Museum of Natural Science of the Institute of La Salle, our methods for preserving specimens.

Several members of our scientific staff devote some of their time to lecturing and to supervising the studies of graduate or undergraduate students who carry on special work at the Museum. Dr. Paul S. Martin, Chief Curator of Anthropology, Dr. Donald Collier, Curator of South American Archaeology and Ethnology, and George I. Quimby, Curator of North American Archaeology and Ethnology, gave the course in museology at the Museum for the University of Chicago during the winter and spring quarters. The advanced course in vertebrate paleontology of the University of Chicago was given at the Museum by Dr. Everett C. Olson, professor of vertebrate paleontology at the university and Research Associate in the Museum's Division of Fossil Vertebrates. Dr. Francis Drouet, Curator of the Cryptogamic Herbarium, taught a course on freshwater algae for the summer session of the University of Minnesota at Lake Itasca Forestry and Biological Station. D. Dwight Davis, Curator of Vertebrate Anatomy, was given a six-month leave of absence to serve as visiting professor of paleontology at California Institute of Technology. Dr. Julian A. Steyermark, Curator of the Phanerogamic Herbarium, lectured at Washington University (St. Louis); Dr. Robert H. Denison, Curator of Fossil Fishes, at Northwestern University; Dr. Karl P. Schmidt, Chief Curator of Zoology, at University of Chicago and University of Michigan; Philip Herskovitz, Associate Curator of Mammals, at University of Illinois (Urbana); and Dr. Fritz Haas, Curator of Lower Invertebrates, at Hebrew University, Jerusalem, Israel.

College classes from University of Chicago, McMaster University (Hamilton, Ontario), Northwestern University, and Valparaiso University visited the scientific departments of the Museum and inspected the laboratories, workrooms, and herbaria. Individual students seeking information came in increasing numbers to the Museum from distant as well as near-by colleges and universities, among them De Paul University, Illinois Institute of Technology, Morton Junior College, Wheaton College, Illinois State Normal University, Western Michigan College of Education, Hiram College, and University of Wisconsin. Chicago Academy of Fine Arts, Institute of Design, and School of the Art Institute of Chicago are among art schools that use the Museum regularly for supervised study and class work (the Museum presents each summer a special showing in Stanley Field Hall of work by students from the School of the Art Institute). Under the co-operative educational plan adopted in 1946 by the Museum and Antioch College, Yellow Springs, Ohio, twelve young men and women were employed in 1954 by the Museum in its scientific departments and Library.

## MAINTENANCE, CONSTRUCTION, AND ENGINEERING

The major work of converting Hall H on the ground floor into a storage, research, and study area was completed this year. The Pacific Research Laboratory, as this area is now called, is probably the finest ethnological research laboratory in existence anywhere (see page 40). Its facilities include not only ample storage for all types of ethnological specimens but also special installations for proper hanging of clothing, drawer-storage of small items, a poison-room with adequate exhaust fans for care of materials subject to insect damage, and well-lighted study space. The availability of the stored specimens has been uppermost in the minds of the anthropologists who planned the laboratory and of the maintenance and engineering personnel who carried out the plans and spared no effort to make the laboratory comfortable, complete, and efficient. Illumination is provided through installation of 217 fluorescent

Cabinets for filing small and fragile objects are among the special installations provided in the spacious storage-room of the new Pacific Research Laboratory.



units. A room in the anthropology area on the third floor was set aside for the care and study of the Museum's library of Far Eastern archaeology and ethnology, an important part of which is the Berthold Laufer Collection (see page 67). Steel shelving, study tables, and fluorescent lighting were installed to make this room a complete study-unit.

Throughout the year maintenance and engineering personnel supported the work of the scientific departments in their installations by preparing special cases and lighting boxes, special lighting equipment, picture frames, and miscellaneous items as required. The moving of exhibition cases and heavy exhibition material was also done by maintenance personnel, experienced in this type of work. Packing cases were prepared for shipment of publications, specimens, and expeditionary equipment. Lighting was changed or augmented, and a multiplicity of minor tasks was accomplished for the smooth operation of various other phases of Museum work. In addition, experimental models were prepared for the Division of Birds, and 4,000 pieces of cork and 1,500 wooden blocks were cut to measure for storage boxes in the Division of Insects. The periodic poisoning of exhibition cases that contain vulnerable material was continued according to schedule. Eight additional benches were built and placed in exhibition halls to relieve "Museum fatigue." Handrails were installed on the outside steps at the south entrance of the building to assist visitors in times of slippery pavements and windy or stormy weather.

Tuckpointing was done in localized areas, primarily the outside steps and the stack. New window shades were installed in the exhibition halls on the ground and first floors. The time of the painters that was actually not needed for finishing Museum cases, screens, or other installation equipment was devoted to washing and painting walls in offices, corridors, and exhibition halls. The cleanliness of the building depends on ceaseless and repetitious care.

The Division of Engineering continued its program of substitution of new panel-boards for the older types originally installed in the building, which are now obsolete. Nine new units were provided, and new heavy-duty outlets now make adequate lighting possible for photographing exhibits in the exhibition halls. Ceiling fixtures were removed in two exhibition halls (7 and 34), and lighting boxes equipped with fluorescent fixtures were installed on the exhibition cases. A new 16mm projector was purchased and installed in James Simpson Theatre, aisle lights were repaired or replaced if necessary, and the public-address system was checked and improved so that lectures may be given under the best conditions possible.



All boilers were thoroughly cleaned, drums washed out, and tubes turbinized as early in the summer as the heating season would permit. Boiler walls were covered with mastic insulating material to stop air leaks and maintain boiler efficiency. The entire plant was cleaned and inspected; pumps were checked for wear and in some cases completely overhauled. A new return-pipe was installed in Hall D (ground floor) to by-pass an old installation underground that was not functioning effectively. Five hundred new radiator traps were installed throughout the building in order to complete the replacement program started last year. Normal maintenance of water, gas, and sewer lines was carried on throughout the year as needs developed. Under existing contracts with Shedd Aquarium and the Chicago Park District, a total of approximately 28,100,000 pounds of steam was provided.

#### MISCELLANEOUS

In the pages that follow are submitted the Museum's financial statements, attendance statistics, door receipts, accessions, list of Members, articles of incorporation, and amended by-laws.

CLIFFORD C. GREGG, *Director*  
*Chicago Natural History Museum*



# COMPARATIVE STATEMENT OF RECEIPTS AND EXPENDITURES CURRENT FUNDS

FOR YEARS 1954 AND 1953

## Operating Fund

RECEIPTS	1954	1953
From investments of		
General endowment funds . . . . .	\$ 711,279.14	\$ 708,344.42
Life and associate membership funds . . . . .	29,525.31	27,728.10
	<u>\$ 740,804.45</u>	<u>\$ 736,072.52</u>
Chicago Park District . . . . .	139,554.27	127,532.68
Annual and sustaining memberships . . . . .	25,335.00	20,695.00
Admissions . . . . .	34,105.75	33,049.50
Sundry receipts, including general purpose contributions . . . . .	49,043.84	39,820.81
Restricted funds transferred to apply against Operating Fund expenditures (contra) . . . . .	88,894.08	83,754.49
	<u>\$1,077,737.39</u>	<u>\$1,040,925.00</u>
EXPENDITURES		
Operating expenses		
Departmental operating expenses . . . . .	\$ 452,071.58	\$ 423,848.91*
General operating expenses . . . . .	371,564.11	389,173.24*
Building repairs and alterations . . . . .	87,933.21	107,718.50
	<u>\$ 911,568.90</u>	<u>\$ 920,740.65</u>
Collections		
Purchases and expedition costs . . . . .	35,885.15	36,912.11
Furniture, fixtures, and equipment . . . . .	40,790.25	9,853.66
Pensions and employee benefits . . . . .	64,474.03	57,016.82
Appropriations in lieu of premiums formerly payable on assigned life insurance . . . . .	14,500.00	14,500.00
Provision for mechanical plant depreciation (contra) . . . . .	10,000.00	10,000.00
Appropriated to cover operating deficit of The N. W. Harris Public School Extension (contra) . . . . .	1,238.79	123.65
	<u>\$1,078,457.12</u>	<u>\$1,049,146.89</u>
DEFICIT FOR YEAR . . . . .	<u>\$ (719.73)</u>	<u>\$ (8,221.89)</u>

\* Museum general operating expenses for the year 1953 of \$314,721.38 have been transferred to departmental operating expenses to conform with 1954 classification

CONTINUED ON NEXT PAGE

# COMPARATIVE STATEMENT OF RECEIPTS AND EXPENDITURES—CURRENT FUNDS

FOR YEARS 1954 AND 1953 (CONTINUED)

## The N. W. Harris Public School

Extension	1954	1953
Income from endowments . . . . .	\$ 22,818.55	\$ 21,369.33
Expenditures . . . . .	<u>24,057.34</u>	<u>21,492.98</u>
DEFICIT TRANSFERRED TO OPERATING FUND (CONTRA) . . . . .	\$ <u>(1,238.79)</u>	\$ <u>(123.65)</u>

## Other Restricted Funds

### RECEIPTS

From Specific Endowment Fund investments	\$ 59,319.99	\$ 53,805.44
Contributions for specified purposes . . . . .	25,218.38	13,400.00
Operating Fund appropriations for mechanical plant depreciation and contingencies (contra) . . . . .	10,000.00	10,000.00
Sundry receipts—net . . . . .	<u>39,731.26</u>	<u>36,808.81</u>
	\$ <u>134,269.63</u>	\$ <u>114,014.25</u>

### EXPENDITURES

Transferred to Operating Fund to apply against expenditures (contra) . . . . .	\$ 88,894.08	\$ 83,754.49
Added to Endowment Fund principal . . . . .	<u>30,000.00</u>	<u>52,000.00</u>
	\$ <u>118,894.08</u>	\$ <u>135,754.49</u>
EXCESS (DEFICIENCY) OF INCOME OVER EX- PENDITURES . . . . .	\$ <u>15,375.55</u>	\$ <u>(21,740.24)</u>

TO THE TRUSTEES  
CHICAGO NATURAL HISTORY MUSEUM  
CHICAGO, ILLINOIS

In our opinion the accompanying statement presents fairly the receipts and expenditures of the current funds of Chicago Natural History Museum for the years 1954 and 1953, in conformity with generally accepted accounting principles consistently applied during the year. Our examination of the statement was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

ARTHUR YOUNG AND COMPANY

Chicago, Illinois  
January 21, 1955

# COMPARATIVE ATTENDANCE STATISTICS AND DOOR RECEIPTS

FOR YEARS 1954 AND 1953

	1954		1953
Total attendance.....	1,142,200		1,204,855
Paid attendance.....	136,423		132,198
Free admissions on pay days			
Students.....	37,724		32,450
School children.....	97,891		75,979
Teachers.....	4,855		4,667
Members of the Museum.....	575		520
Service men and women.....	1,540		1,648
Special meetings and occasions.....	2,793		1,095
Press.....	20		6
Admissions on free days			
Thursdays (52).....	151,014	(52)	155,497
Saturdays (51).....	280,835	(52)	277,346
Sundays (52).....	428,530	(52)	523,467
Highest attendance on any day			
(August 15).....	13,610	(February 22)	15,323
Lowest attendance on any day			
(December 15).....	238	(December 18)	161
Highest paid attendance (July 5).....	5,147	(September 7)	4,223
Average daily admissions (363 days).....	3,147	(363 days)	3,319
Average paid admissions (208 days).....	656	(207 days)	633
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Number of picture post-cards sold.....	236,575		248,392
Sales of Museum publications (scientific and popular), <i>General Guide</i> , and photographs; articles checked; rental of wheel chairs.....	\$20,754.17		\$21,078.60

## Contributions and Bequests

Contributions and bequests to Chicago Natural History Museum may be made in securities, money, books, or collections. They may, if desired, take the form of a memorial to a person or cause, to be named by the giver. For those desirous of making bequests to the Museum, the following form is suggested:

### FORM OF BEQUEST

I do hereby give and bequeath to Chicago Natural History Museum of the City of Chicago, State of Illinois:

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*Cash contributions made within the taxable year to Chicago Natural History Museum to an amount not in excess of 20 per cent of the taxpayer's net income are allowable as deductions in computing net income for federal income tax*

# ACCESSIONS, 1954

## DEPARTMENT OF ANTHROPOLOGY—ACCESSIONS

### CHICAGO NATURAL HISTORY MUSEUM:

Collected by Dr. Paul S. Martin (Southwest Archaeological Expedition, 1954): 51 whole or restorable pottery vessels, 180 stone, bone, and clay artifacts, and 6 burials—Higgins Flat Pueblo, Apache Creek Pueblo, and Valley View Pueblo, near Reserve, New Mexico

Collected by George I. Quimby and James R. Getz (Lower Mississippi Valley Archaeological Field Trip, 1954): archaeological materials of stone and clay from sites in Mississippi and Louisiana

*Purchases:* 2 textile specimens of Paracas culture, Peru; cast of complete skull and mandible from La Ferrassie, France; 64 specimens (silver ornaments, beads, etc.) from historical-period Indian graves along Des Plaines River, near Channahon, Will County, Illinois

CHILDS, C. F., Chicago: palm-leaf book containing texts in Pali(?)—southern India(?) (gift); pottery cup, Early Dynastic—Ur of the Chaldees (gift)

DRAKE, TERESA, Chicago: Chippewa or Potawatomi bandoleer and pouch—upper Great Lakes area (gift); Sioux(?) pipe bag—Plains area (gift)

FLORIDA, UNIVERSITY OF, Gainesville: Kickapoo collection—Oklahoma and Mexico (exchange)

GESILER, MRS. F. W., Burbank, California: 5 spurs (and case) for cock-fighting—Sumatra (gift)

HARVEY, BYRON, III, Chicago: Ashanti brass weight shaped like peanut—West Africa (gift); dance kilt (Jemez)—New Mexico (gift)

HESTER, EVETT D., Jeffersonville, Indiana: 134 pieces from Hester Collection of Philippine ceramic recoveries—Philippine Islands (gift)

MCBAIN, HUGHSTON M., Chicago: Japanese sword (17th-century Shinano)—Japan (gift)

MENDELSON, R. W., M.D., Albuquerque: house model—Siam (gift)

NELSON, MRS. SELMA O., Chicago: pair of Lapp-type moccasins—Sweden (gift)

SCHWAB, HENRY C., ESTATE OF, Chicago: 10 pieces of Chinese porcelain—China (gift)

TRIER, ROBERT, Chicago: plate made from mother-of-pearl—Hong Kong, China (gift)

WENNER-GREN FOUNDATION FOR ANTHROPOLOGICAL RESEARCH, INC., New York: wooden Churinga (probably Arunta)—Central Australia (gift)

## DEPARTMENT OF BOTANY—ACCESSIONS

ARISTEGUIETA, DR. LEANDRO, Caracas, Venezuela: 8 plant specimens (gift)

BAUER, BILL, Imperial, Missouri: plant specimen (gift)

BECKER, ROBERT H., Chicago: 3 plant specimens (gift)

BENNETT, HOLLY REED, Chicago: 3,762 plant specimens (gift)

BERLINER, DR. J. F. T., Chicago: 10 plant specimens (gift)

BRANISA, PROFESSOR L., Sucre, Bolivia: 2 lichens (gift)

BRAUN, DR. E. LUCY, Cincinnati: 2 plant specimens (gift)

BRITISH MUSEUM (NATURAL HISTORY), London: 240 plant specimens (exchange)

CAETAÑEDA, RAPHAEL ROMERO, Ministerio de Agricultura, Bogotá, Colombia: plant specimen (gift)

CALIFORNIA, UNIVERSITY OF, Berkeley: 818 plant specimens (exchange); 2 plant specimens, a few seeds and fruits (gift)

CENTRE TECHNIQUE FORESTIER TROPICAL, Nogent-sur-Marne, France: 218 wood specimens (exchange)



CHICAGO NATURAL HISTORY MUSEUM:  
Collected by Dr. Julian A. Steyer-  
mark (field trips): 751 plant specimens

Collected by Dr. John W. Thieret  
(field trips): 94 specimens, 13 plant  
specimens, 110 seed samples

*Purchases*: 203 plant specimens—  
Africa; 1,000 plant specimens—Austra-  
lia; 860 plant specimens—Canada; 300  
plant specimens—Japan; 79 plant speci-  
mens—Mexico

COMMONWEALTH SCIENTIFIC AND  
INDUSTRIAL RESEARCH ORGANIZATION,  
South Melbourne, Australia: 50 wood  
specimens (exchange)

CULBERSON, WILLIAM L., Madison,  
Wisconsin: 15 lichens (gift)

DAILY, MRS. FAY K., Indianapolis:  
556 cryptogamic specimens (gift)

DAWSON, E. YALE, Los Angeles:  
cryptogamic specimen (gift)

DIGREE, MRS. BETHA, Kodiak,  
Alaska: plant specimen (gift)

DISTILLATION PRODUCTS INDUSTRIES,  
Rochester, New York: 5 economic  
specimens (gift)

DOWNING, GLENN R., Battle Creek,  
Michigan: plant specimen (gift)

DUDLEY HERBARIUM, Stanford Uni-  
versity, California: 36 liverworts (ex-  
change)

DYBAS, HENRY S., Homewood, Illi-  
nois: 51 fungi (gift)

EISEMAN, RALPH M., Chicago: plant  
specimen (gift)

ESCUELA AGRÍCOLA PANAMERICANA,  
Tegucigalpa, Honduras: 762 plant  
specimens (exchange)

FACULTAD DE CIENCIAS NATURALES  
Y MUSEO, Buenos Aires, Argentina: 200  
plant specimens (exchange)

FASSETT, DR. NORMAN C., Madison,  
Wisconsin: 34 plant specimens (gift)

FIELD, DR. HENRY, Coconut Grove,  
Florida: 109 plant specimens, 15 crypto-  
gamic specimens (gift)

FLORISTS' REVIEW, Chicago: plant  
specimen (gift)

FOREST RESEARCH INSTITUTE, Ro-  
torua, New Zealand: 33 wood specimens  
(exchange)

FORESTS, CONSERVATOR OF, Accra,  
Gold Coast: 32 wood specimens (ex-  
change)

FORESTS, CONSERVATOR OF, Nairobi,  
Kenya: 12 wood specimens (exchange)

FORESTS, DEPARTMENT OF, Natanya,  
Israel: 22 wood specimens (exchange)

FRENCH, GERTRUDE, Park Ridge,  
Illinois: plant specimen (gift)

GLIDDEN COMPANY, SOYA PRODUCTS  
DIVISION, Chicago: 8 economic speci-  
mens (gift)

GREENBERG, ALBERT, Tampa, Flor-  
ida: plant specimen (gift)

HAAS, DR. FRITZ, Chicago: plant  
specimen (gift)

HARVARD UNIVERSITY, Cambridge,  
Massachusetts: BOTANICAL MUSEUM,  
14 plant specimens (gift); GRAY HER-  
BARIUM, a few seeds and fruits (gift);  
HERBARIUM OF CRYPTOGAMIC BOTANY,  
238 cryptogamic specimens (exchange)

HARVEY, BRYON, III, Chicago: plant  
specimen (gift)

HEISER, DR. CHARLES B., JR.,  
Bloomington, Indiana: 16 plant speci-  
mens (exchange)

HERSHEY, ROBERT, Woodruff, Wis-  
consin: fungus (gift)

HITCHCOCK, C. LEO, Seattle: 13  
plant specimens (exchange)

HOWELL, MRS. META P., Chicago:  
plant specimen (gift)

ILLINOIS, UNIVERSITY OF, Urbana:  
325 plant specimens (exchange)

ILLINOIS STATE MUSEUM, Springfield:  
97 plant specimens (gift)

ILTIS, DR. HUGH H., Fayetteville,  
Arkansas: 253 plant specimens (ex-  
change)

INSTITUTO BIOLOGICA DE DEFESA  
AGRICULTURA E ANIMAL, São Paulo,  
Brazil: 21 plant specimens (exchange)

INSTITUTO BOTANICO, Caracas, Vene-  
zuela: plant specimen (gift)

INSTITUTO DE BIOLOGIA, Chapulte-  
pec, Mexico: 25 plant specimens  
(exchange)

INSTITUTO GEOBIOLOGICE "LA  
SALLE" DE CANOAS, Estado do Rio  
Grande do Sul, Brazil: 20 plant speci-  
mens (exchange)

KASPIEW, PROFESSOR B., Adelaide,  
Australia: 5 plant specimens (gift)

LAUGHLIN, KENDALL, Chicago: 3  
plant specimens (gift)

LAWSON, G. W., Achimota, Gold  
Coast: 62 algae (gift)

LEWIN, DR. R. A., Maritime Re-  
gional Laboratory, Halifax, Nova  
Scotia: 14 algae (gift)

LOUISIANA POLYTECHNIC INSTITUTE,  
Ruston: 90 plant specimens (exchange)

MCGILLIARD, ELEANOR, Chattanooga, Tennessee: 2 plant specimens (gift)

MICHIGAN, UNIVERSITY OF, Ann Arbor: 146 cryptogamic specimens (exchange); 2 plant specimens (gift)

MISSOURI BOTANICAL GARDEN, St. Louis: 145 plant specimens (exchange); a few seeds and fruits (gift)

MORTON ARBORETUM, Lisle, Illinois: plant specimen (gift)

MULLINEUX, DR. E. G., Liverpool, England: 2 microscope slides (exchange)

MUSEO DE HISTORIA NATURAL, Lima, Peru: 50 plant specimens (exchange)

MUSÉUM NATIONAL D'HISTOIRE NATURELLE, Paris: 575 plant specimens (exchange); 11 plant specimens (gift)

NAPOLI, A., New York: economic specimen (gift)

NAYLOR, DR. E., Fayette, Iowa: plant specimen (gift)

NEWBILL, T. J., Fort Lauderdale, Florida: 2 plant specimens (gift)

NEW YORK BOTANICAL GARDEN, New York: 374 plant specimens (exchange); a few seeds and fruits (gift)

NIELSON, DR. CHESTER S., Talahassee, Florida: 377 algae (gift)

NORTHWESTERN UNIVERSITY, Evanston, Illinois: *Index to American Botanical Literature* (Torrey Botanical Club) (gift)

PALMER, ERNEST J., Webb City, Missouri: 1,565 plant specimens (gift)

PERRY, MRS. E. C., Chicago: plant specimen (gift)

PETERS, DR. HANS M., Tübingen, Germany: 3 plant specimens (gift)

PHILADELPHIA ACADEMY OF NATURAL SCIENCES, Philadelphia: a few seeds and fruits (gift)

RICHARDS, DONALD, FUND: 50 mosses—New Zealand; 400 cryptogams—Sweden

RICHARDS, ELMER J., FUND: 7,000 lichens—Italy

RICHARDSON, EUGENE S., JR., Gurnee, Illinois: 2 fungi (gift)

ROSS, LILLIAN A., Chicago: plant specimen (gift)

ROYAL BOTANIC GARDENS, Kew, England: 37 plant specimens (exchange)

SBARBARO, DR. CAMILLO, Spotorno (Savona), Italy: 401 cryptogamic specimens (gift)

SCHULTES, DR. RICHARD E., Cambridge, Massachusetts: 45 plant specimens (gift)

SEGAL, SIMON, Chesterton, Indiana: 2 plant specimens (gift)

SELLA, EMIL, Hazelcrest, Illinois: 4 fungi (gift)

SHERFF, DR. EARL E., Chicago: 1,222 plant specimens, 19 photographs (gift)

SMITH, MRS. ELLEN T., Lake Forest, Illinois: plant specimen (gift)

SOUTHERN METHODIST UNIVERSITY, Dallas: 106 mosses (exchange)

SWIFT AND COMPANY, Hammond, Indiana: economic specimen (gift)

SWINK, FLOYD A., Chicago: 157 plant specimens (gift)

THIERET, DR. JOHN W., Chicago: 170 seed samples, 145 plant specimens, 248 wood specimens (gift)

TILDEN, JOSEPHINE E., Lake Wales, Florida: 32 algae (gift)

UNITED STATES DEPARTMENT OF AGRICULTURE: 23 plant specimens, 73 wood specimens (exchange); 27 economic specimens (gift)

UNITED STATES NATIONAL MUSEUM, Washington, D.C.: 17 plant specimens (exchange); 1 cryptogamic specimen, a few seeds and fruits (gift)

UNIVERSITETS INSTITUTION FÜR SYSTEMATISK BOTANIK, Uppsala, Sweden: 62 plant specimens, 784 cryptogamic specimens (exchange)

VALPARAISO UNIVERSITY, Valparaiso, Indiana: 5,625 plant specimens (gift)

VIRGINIA-CAROLINA CHEMICAL CORPORATION: New York: economic specimens (gift)

VOTH, DR. PAUL, Chicago: plant specimen (gift)

WEBSTER, GRADY L., Ann Arbor, Michigan: 15 plant specimens (gift)

WILSON, ARCHIE F., Mount Gilead, Ohio: 16 wood specimens (exchange); 54 plant specimens (gift)

WOLF, MRS. MARION, Lafayette, Louisiana: 45 fruits (gift)

WOOD, JOHN W., Maplewood, Louisiana: plant specimen (gift)

YALE UNIVERSITY, New Haven, Connecticut: 24 plant specimens (gift)

## DEPARTMENT OF GEOLOGY—ACCESSIONS

BENNETT, HOLLY REED: 7 polished nodule-sections, 3 polished orbicular jasper-sections, 2 specimens of amygdaloidal basalt—Oregon and California (gift)

BLINDIE, RICHARD, Shenandoah, Pennsylvania: collection of fossil ferns—Pennsylvania (gift)

BRITISH MUSEUM (NATURAL HISTORY), London: casts of fossil primates—Kenya (exchange)

BROWN, GEORGE F., Chicago: collection of rocks and minerals—various localities (gift)

CALIFORNIA INSTITUTE OF TECHNOLOGY, Pasadena: cast of fossil horse (composite) (exchange)

CHICAGO, UNIVERSITY OF, Chicago: collection of fossil reptiles, amphibians, fishes—Texas (gift)

CHICAGO NATURAL HISTORY MUSEUM:  
Collected by Dr. Robert H. Denison (John Simon Guggenheim Memorial Foundation study trip, 1953–54): casts and specimens of fossil fishes—Great Britain, Sweden, and Norway

Collected by Bryan Patterson and Orville L. Gilpin (Texas Paleontological Expedition, 1954): 14 gastropods—Texas; 1,200 pounds of concentrates—Trinity sands of Texas

Collected by Robert K. Wyant (Lake Superior Geological Field Trip, 1954): rocks and minerals—Lake Superior region

*Purchases*: 13 rocks and minerals—various localities; 31 rocks and minerals—Antarctic region

*Transfers*: James H. Ferris Collection of Miocene shells (Maryland)—from Department of Zoology, Chicago Natural History Museum (see page 61 and also Accessions, Department of Zoology, "Joliet Township High School," page 98)

CHICAGO NATURAL HISTORY MUSEUM, MEMBERS OF THE BOARD OF TRUSTEES: restored skeleton of *Gorgosaurus libratus*—Alberta, Canada (gift)

COPELAND, MURRAY, Ann Arbor, Michigan: 4 slides of mounted Pennsylvanian ostracods (gift)

COPULOS, MILTON, Chicago: fossil oyster—Greece (gift)

CORNFIELD, HARRY, Chicago: specimen containing Tertiary leaf—Colorado (gift)

DENISON, DR. ROBERT H., Chicago: 4 specimens of *Dictyocaris*—Norway (gift)

FIGORE, CARL, Chicago: concretion—Illinois (gift)

HARVEY, BYRON, JR., and BYRON HARVEY III, Chicago: collection of fossil invertebrates, vertebrates, and plants—various European localities (gift)

HAZEL, BURRELL F., Fort Peck, Montana: collection of fossil crabs, ammonites, pelecypods—Montana (gift)

KREUTZER, DAN, Chicago: trilobite specimens and slab containing Ordovician invertebrates—Ohio and Indiana (gift)

KREUTZER, DAN, Chicago, and JOHN CUTLER, Cincinnati, Ohio: slab and 6 specimens of *Glyptocrinus dyeri*—Ohio (gift)

LANGFORD, GEORGE, Chicago, EUGENE S. RICHARDSON, JR., Gurnee, Illinois, and DR. AND MRS. ROBERT H. WHITFIELD, Evanston, Illinois: 2 Pennsylvanian myriapods—Illinois (gift)

NORTHWESTERN UNIVERSITY DENTAL SCHOOL, Chicago: Bebb collection of fossil vertebrates—Rancho la Brea, Los Angeles (gift)

PALEONTOLOGISK MUSEUM, Oslo, Norway: 34 Devonian fossil fishes—Norway and Spitsbergen (exchange)

RICHARDSON, DR. EUGENE S., JR., Gurnee, Illinois: 2 Cretaceous worms—New Jersey (gift)

ROBERT, MAX, Paris: phosphate ore containing shark's tooth—Algeria (gift)

ROBERTS, TOM, Chicago: specimen of pyrite—Wyoming (gift)

SMITHSONIAN INSTITUTION, Washington, D.C.: 27 rocks—various localities (exchange)

STEEN, CHARLES A., Moab, Utah: specimens of uranium-vanadium ore—San Juan County, Utah (gift)

STOCKS, CLAYTON, Moab, Utah: specimens of uranium-vanadium ore—San Juan County, Utah (gift)

UNITED STATES NATIONAL MUSEUM, Washington, D.C.: rubber casts of skeleton of *Phlegethontia mazonensis*—Illinois (exchange)

VERA, EUGENIO, Rio Piedras, Puerto Rico: 3 mandibles and 2 isolated teeth of *Isolobodon portoricensis*—Puerto Rico (exchange)

WALKER, MR. AND MRS. PRESTON, Grand Junction, Colorado: *Diplacodon* jaw, 4 turtle carapaces, 3 turtle plastrons—Colorado (gift)

WRAY, O. R., Val d'Or, Quebec, Canada: specimen of varved clay—Canada (gift)

WYOMING, UNIVERSITY OF, Laramie: *Astraspis* and *Eripsychius*—Wyoming (exchange)

ZANGERL, CARL, Hazelcrest, Illinois: collection of fossil invertebrates—Illinois (gift)

## DEPARTMENT OF ZOOLOGY—ACCESSIONS

ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, Philadelphia: bird—Haiti (exchange)

ACOSTA Y LARA, EDUARDO, Montevideo, Uruguay: 7 bat skins and skulls—Uruguay (gift)

AMERICAN MUSEUM OF NATURAL HISTORY, New York: DEPARTMENT OF AMPHIBIANS AND REPTILES, snake—Belgian Congo (exchange); 2 frogs (paratypes)—Chile (exchange); DEPARTMENT OF INSECTS AND SPIDERS, weevil (paratype)—Mexico (gift); 198 beetles (49 paratypes of 19 species)—Mexico, United States, and Bahama Islands (gift)

ARIAS C., SERGIO, Caracas, Venezuela: collection of non-marine shells—Venezuela (gift)

ATKINS, OWEN E., Oshkosh, Wisconsin: bird skin—Africa (gift)

BARTEL, MR. (full name lacking), Chicago: bat—Chicago (gift)

BEATTY, LEE D., Tucson, Arizona: 10 bat flies—Arizona (exchange)

BEER, DR. JAMES, St. Paul: 2 bat skins and skulls—Mexico (gift)

BENESH, BERNARD, Burrville, Tennessee: 126 beetles—Tennessee and Madagascar (gift)

BERGSTROM, DAVID W., Oxford, Ohio: 147 insects and allies—Mexico (gift)

BIESE, DR. WALTER, Santiago, Chile: collection of fresh-water shells (15 paratypical lots)—Chile (exchange)

BOKERMANN, DR. WERNER C. A., São Paulo, Brazil: 7 frogs—Brazil (exchange)

BOLLING, MRS. ROBERT, Omaha: collection of marine shells—Alaska (gift)

BONDAR, DR. GREGORIO, Salvador, Bahia, Brazil: 3 beetle cotypes—Brazil (gift)

BORELL, DR. ADREY E., Oklahoma City: 3 bats—Texas (gift)

BRODIE, LAURA, Chicago: snake—South Carolina (gift)

BRODKORB, PIERCE, Gainesville, Florida: 7 frogs, 10 lizards—Mexico (exchange)

BROWN, DR. WALTER C., Dumaguete, Negros, Philippine Islands: 5 frogs—Philippine Islands (gift)

BUCH, FATHER A., Dalat, Vietnam, Indochina: 10 lizards, 20 snakes—(gift)

BURNS, LIEUTENANT COLONEL KENNETH, Fort Sam Houston, Texas: 2 bats—Texas (gift)

CALIFORNIA ACADEMY OF SCIENCES, San Francisco: collection of inland shells—various South American countries (gift)

CAMPBELL, JOHN M., Albuquerque, New Mexico: 17 birdskins—Philippine Islands (gift)

CHICAGO ACADEMY OF SCIENCES, Chicago: 17 paratypes of mites—Illinois (gift)

CHICAGO NATURAL HISTORY MUSEUM: Collected by Henry S. Dybas (California Zoological Field Trip, 1952): 3,351 insects and allies, 21 lots of isopods and snails—California; (Midwest Zoological Field Work, 1953): 1,162 insects and allies—various southern states

Collected by Donald S. Erdman (West Indies Zoological Expedition, 1953): 859 fishes—Haiti, Dominican Republic, and Puerto Rico

Collected by Dr. Fritz Haas (Palestine Zoological Expedition, 1954): worm-snake (Israel), 112 insects—Palestine

Collected by Gerd H. Heinrich (Conover Angola Expedition, 1954): 1,096 birdskins, 425 mammals, 56 amphibians and reptiles—Angola

Collected by Celestino Kalinowski (Peru Zoological Expedition, 1953–54): 139 amphibians and reptiles, 51 fishes, 317 birdskins, 2 bird nests with eggs,



1,043 mammals, 21 lots of inland mollusks and crustacea, 469 insects—Peru

Collected by Hymen Marx (Louisiana Zoological Field Trip, 1954): 14 reptiles, 1 fish—Louisiana and Mississippi

Collected by Dr. Austin L. Rand (Philippines Study Trip, 1953–54): 10 mammals, 368 birds—Philippine Islands

*Purchases:* 1,822 mammals, 655 birds, 703 reptiles and amphibians, 27 fishes, 9,540 insects, approximately 1,750 lots of lower invertebrates

CHICAGO ZOOLOGICAL SOCIETY, Brookfield, Illinois: 18 birdskins and 6 bird skeletons, 2 mammals, 5 reptiles—various localities (gift)

CINCINNATI UNIVERSITY OF, DEPARTMENT OF ZOOLOGY, Cincinnati: 2 birdskins—Ohio (exchange)

COLE, STANLEY, Puente, California: mammal—locality unknown (gift)

CONANT, ROGER, Philadelphia: 2 garter snakes (neotypes)—South Carolina (gift)

COOK, DR. DAVID, Detroit: 29 water mites ((11 holotypes, 18 paratypes)—various localities (gift)

COPE, DR. JAMES B., Richmond, Indiana: bat, snake—South Africa (exchange)

COPLAND, STEPHEN J., Australia: lizard (paratype)—Australia (gift)

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DENDY, DR. JACK S., Auburn, Alabama: 2 lampreys—Alabama (gift)

DRAKE, ROBERT J., San Diego: 9 land shells—California and Mexico (exchange)

DU BOIS, DR. ERNEST P., Urbana, Illinois: 2 mammal skulls, reptile skeleton, amphibian skull, fish skull—locality unknown (gift)

DYBAS, HENRY S., Homewood, Illinois: 150 insects and allies—Illinois (gift)

EISEMAN, RALPH M., Chicago: birdskin—Illinois (gift)

ERDMAN, DONALD S., Mayaguez, Puerto Rico: 19 lots of fishes—Dominican Republic and Puerto Rico (gift)

FIELD, DR. HENRY, Coconut Grove, Florida: collection of marine shells—Dibai, Persian Gulf (gift)

FLEMING, DR. ROBERT L., Mussoorie, India: 1,095 birdskins—India and Nepal (gift and exchange)

FLORIDA, UNIVERSITY OF, Gainesville: birdskin—Mexico (exchange)

FLORIDA STATE BOARD OF HEALTH, Jacksonville: 56 bats—Florida (gift)

FRANZEN, ALBERT J., Chicago: birdskin—Chicago (gift)

GAISLER, JIRI, Prague, Czechoslovakia: 10 bats—Czechoslovakia (exchange)

GENERAL BIOLOGICAL SUPPLY HOUSE, Chicago: 23 reptiles—India (gift)

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HAAS, DR. GEORG, Jerusalem, Israel: 11 bats—Israel (exchange)

HAINES, R. WHEELER, Sheffield, England: hedgehog—Central England (gift)

HARBOURS AND MARINE, DEPARTMENT OF, Brisbane, Australia: 71 fishes—various localities (exchange)

HARRISON, CARTER H., JR., Chicago: 8 fresh-water shells—Michigan (gift)

HEINZELMANN, DR. ALFRED, Piura, Peru: 3 rats—Peru (gift)

HENTIG, ROLAND VON, Chicago: 11 fishes—Indonesia (gift); 21 amphibians and reptiles—various localities (gift)

HOGER, RICHARD B., Westmont, Illinois: 14 shore birds (skeletons)—Illinois (gift)

HOOGSTRAAL, HARRY, Cairo, Egypt: 167 birds, 86 fishes, 685 amphibians and reptiles, 799 mammals, 5 lots of land shells, 119 insects (10 paratypes)—Egypt and Turkey (gift)

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JONES, CLARK E., Miami, Florida: 25 tree snails—Florida (gift)



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MELCHIOR, MRS. ANNE, Chicago: lot of land snails—Colorado (gift)

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MOORE, IAN M., El Cajon, California: 2 paratypes of a beetle—Mexico (gift)

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MUSEUM OF COMPARATIVE ZOOLOGY, Cambridge, Massachusetts: 51 amphibians and reptiles (all but one are either cotypes or paratypes)—various localities (exchange)

NATIONAL MUSEUM, Manila: 30 birdskins—Philippine Islands (gift)

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NORTHWESTERN UNIVERSITY DENTAL SCHOOL, Chicago: 49 amphibian, reptile, and mammal skulls (2 sets of elephant teeth)—various localities (gift)

OLD, WILLIAM E., JR., Norfolk, Virginia: 2 lots of sea shells—Virginia (gift)

PARK, DR. ORLANDO, Evanston, Illinois: collection of shells—world-wide (gift)

RABOR, DR. D. S., Dumaguete, Negros, Philippine Islands: 219 birdskins—Philippine Islands (exchange)

RADFORD, DR. CHARLES D., Manchester, England: 16 slides of parasitic mites (8 paratypes)—world-wide (gift)

RAFFLES MUSEUM AND LIBRARY, Singapore: 3 snakes—Malay Peninsula (gift)

REID, DR. GEORGE K., JR., College Station, Texas: 7 fishes—Texas (gift)

SCHMIDT, DR. KARL P., Homewood, Illinois: 23 amphibians and reptiles—India (gift)

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SCHWENGEL, DR. JEANNE S., Scarsdale, New York: collection of sea shells—world-wide (gift); collection of land shells (about 40 paratypes, others representing extinct subspecies)—Cuba (gift)

SEEVERS, DR. CHARLES H., Homewood, Illinois: 44 insects (18 paratypes)—United States and Neotropics (gift); approximately 800 insects—United States, Neotropics, and Philippine Islands (gift)

SENCKENBERG MUSEUM, Frankfurt-am-Main, Germany: collection of mollusks—Peru and San Salvador (exchange)

SMITH, DR. HOBART M., Urbana, Illinois: 2 snakes—Mexico and Panama (gift)

SMITH, DR. PHILIP W., Urbana, Illinois: 2 bat skins and skulls—Illinois (exchange)

STANNARD, LEWIS, Urbana, Illinois, and DR. AND MRS. CLARENCE L. GOOD-NIGHT, Lafayette, Indiana: 28 beetles—Central America (gift)

STÜBEL, DR. HANS, Erlangen, Germany: Uraniid moth—Madagascar (gift)

SUGERMAN, BERNARD, Santurce, Puerto Rico: 100 insects—Philippine Islands (gift)

SWANSON, WENDEL B., Chicago: 5 frogs, 6 turtles—Australia (gift)

THUROW, GORDON, Bloomington, Indiana: 4 salamanders—Indiana (gift)

TRAPIDO, DR. HAROLD, Panama: 10 tadpoles, 24 bats—Panama (gift)

TRAUB, LIEUTENANT COLONEL ROBERT, Washington, D.C.: 30 fleas on slides (including 3 paratypes), 3 slides of chigger mites (including a paratype)—United States, Mexico, Peru, and Borneo (gift)

TULANE UNIVERSITY OF LOUISIANA, New Orleans: 2 frogs, 16 turtles—United States (exchange)

TWEEDIE, M. W. F., Singapore: snake—Singapore Island (gift)

UNITED STATES FISH AND WILDLIFE SERVICE, Pascagoula, Mississippi: collection of marine invertebrates, 1,344 fishes—State of Mississippi, Gulf of Mexico, and Caribbean Sea (gift)

UNITED STATES NATIONAL MUSEUM, Washington, D.C.: 5,028 fishes, beetle, 14 amphibians and reptiles—Marshall Islands, Pennsylvania, Siam, and Borneo (exchange)

WALKER, THOMAS J., JR., Columbus, Ohio: 123 beetles—Tennessee (exchange)

WATSON, MRS. J. P., Chicago: lower jaw of fish—Delaware (gift)

WERMUTH, DR. HEINZ, Berlin (U. S. Zone): snake—Mexico (exchange)

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### Representative Accessions

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 Hancock, G. Allan  
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 Faulkner, Charles J.  
 Faurot, Henry, Jr.  
 Fay, Eugene C.  
 Feinstein, Edward  
     Howard  
 Feiwell, Morris E.  
 Felix, Benjamin, B.  
 Fellows, William K.  
 Felsenthal, Edward  
     George  
 Fennekohl, Mrs.  
     Arthur C.  
 Fernald, Robert W.  
 Fetzer, Wade  
 Filkins, A. J.  
 Fineman, Oscar  
 Finley, Max H.  
 Finnegan, Richard J.  
 Finnerud, Dr. Clark W.  
 Firscl, Maurice S.  
 Fischel, Frederic A.  
 Fish, Mrs. Helen S.  
 Fishbein, Dr. Morris  
 Fisher, Harry M.  
 Fisk, Mrs. Burnham M.  
 Fleming, Mrs. Joseph B.  
 Florsheim, Harold M.  
 Florsheim, Irving S.  
 Florsheim, Mrs.  
     Milton S.  
 Folonie, Mrs. Robert J.  
 Folsom, Mrs. William R.  
 Foote, Mrs. Harley T.  
 Forch, Mrs. John L., Jr.  
 Ford, Mrs. Willis Roland  
 Foreman, Mrs. Alfred K.  
 Foreman, Mrs. E. G.  
 Foreman, Edwin G., Jr.  
 Foreman, Harold E.  
 Forgan, James B.  
 Forgan, Mrs. J. Russell  
 Forgan, Robert D.  
 Forman, Charles  
 Forster, J. George  
 Fortune, Miss Joanna  
 Foster, Mrs. Charles K.  
  
 Fox, Jacob Logan  
 Fox, Dr. Paul C.  
 Franche, Mrs. D. C., III  
 Frank, Arthur A.  
 Frankel, Louis  
 Frankenstein, William B.  
 Frankenthal, Dr.  
     Lester E., Jr.  
 Franklin, Egington  
 Frazer, Mrs. George E.  
 Freeman, Charles Y.  
 Freiler, Abraham J.  
 French, Dudley K.  
 Frenier, A. B.  
 Freudenthal, G. S.  
 Frey, Charles Daniel  
 Freyn, Henry J.  
 Fridstein, Meyer  
 Friedlander, William  
 Friedlich, Mrs. Herbert  
 Fritsch, Miss Josephine  
 Fuller, Mrs. Gretta  
     Patterson  
 Fuller, J. E.  
 Fuller, Judson M.  
 Furry, William S.  
  
 Gabriel, Adam  
 Gaertner, William  
 Galgano, John H.  
 Gall, Charles H.  
 Gall, Harry T.  
 Gallup, Rockwell L.  
 Galt, Mrs. A. T.  
 Gamble, D. E.  
 Garcia, José  
 Garden, Hugh M. G.  
 Gardiner, Mrs. John L.  
 Gardner, Addison L., Jr.  
 Gardner, Frederick D.  
 Gardner, Henry A.  
 Garen, Joseph F.  
 Garrison, Dr. Lester E.  
 Gary, Theodore S.  
 Gates, Mrs. L. F.  
 Gay, Rev. A. Royal  
 Gear, H. B.  
 Gebhardt, Alfred E.  
 Gehl, Dr. W. H.  
 Gehrman, Felix  
 Geiger, Alfred B.  
 Geiling, Dr. E. M. K.  
 Geittmann, Dr. W. F.  
 Geldmeier, Dr. Erwin F.  
 Gellert, Donald N.  
 Gensburg, Samuel H.  
 Gentry, Veit  
 Gentz, Miss Margaret  
     Nina  
 Gerding, R. W.  
 Gerngross, Mrs. Leo  
 Gerstley, Dr. Jesse R.  
  
 Gettelman, Mrs.  
     Sidney H.  
 Gettleman, Frank E.  
 Getz, Mrs. James R.  
 Getzoff, E. B.  
 Gibbs, Richard F.  
 Gibson, Paul  
 Gibson, Dr. Stanley  
 Gibson, Truman K., Jr.  
 Gidwitz, Alan K.  
 Giffey, Miss Hertha  
 Gifford, Mrs.  
     Frederick C.  
 Gilchrist, Mrs. John F.  
 Gilchrist, Mrs. William  
     Albert  
 Giles, Mrs. Guy H.  
 Gillette, Mrs. Ellen D.  
 Gilmore, Dr. John H.  
 Gimbel, J. W., Jr.  
 Ginther, Miss Minnie C.  
 Giryotas, Dr. Emelia J.  
 Glaescher, Mrs. G. W.  
 Glasner, Rudolph W.  
 Glasser, Joshua B.  
 Goes, Mrs. Arthur A.  
 Goldblatt, Joel  
 Golding, Robert N.  
 Goldstein, Dr. Abraham  
 Goldstein, Dr. Helen L.  
     Button  
 Goldstein, Nathan S.  
 Goldy, Walter I.  
 Goltra, Mrs. William B.  
 Goode, Mrs. Rowland T.  
 Goodman, Benedict K.  
 Goodman, Mrs. Milton F.  
 Goodman, William E.  
 Goodwin, Clarence  
     Norton  
 Goodwin, George S.  
 Gordon, Colin S.  
 Gordon, Harold J.  
 Gordon, Dr. Richard J.  
 Gordon, Mrs. Robert D.  
 Gorrall, Mrs. Warren  
 Gottlieb, Frederick M.  
 Gould, Jay  
 Gould, Mrs. June K.  
 Grade, Joseph Y.  
 Graham, Douglas  
 Graham, E. V.  
 Graham, Miss  
     Margaret H.  
 Gramm, Mrs. Helen  
 Granger, Mrs. Lillian M.  
 Grant, James D.  
 Grant, John G.  
 Graves, Austin T.  
 Graves, Howard B.  
 Grawoig, Allen  
 Gray, Dr. Earle



# ASSOCIATE MEMBERS (continued)

- Gray, Edward  
 Gray, Philip S.  
 Green, Michael  
 Greenacre, Miss Cordelia Ann  
 Greenburg, Dr. Ira E.  
 Greene, Henry E.  
 Greene, Howard T.  
 Greenlee, Mrs. William Brooks  
 Greenman, Mrs. Earl C.  
 Gregory, Stephen S., Jr.  
 Gregory, Tappan  
 Gressens, Otto  
 Grey, Dr. Dorothy  
 Griffenhagen, Mrs. Edwin O.  
 Griffith, Mrs. Carroll L.  
 Griffith, Mrs. William  
 Griswold, Harold T.  
 Grizzard, James A.  
 Groak, Irwin D.  
 Gronkowski, Rev. C. I.  
 Groot, Cornelius J.  
 Groot, Lawrence A.  
 Grossman, Frank I.  
 Grothenhuis, Mrs. William J.  
 Grotowski, Mrs. Leon  
 Gruhn, Alvah V.  
 Grunow, Mrs. William C.  
 Guenzel, Louis  
 Guest, Ward E.  
 Gurley, Miss Helen K.  
 Gustafson, Gilbert E.  
 Gustafson, Mrs. Winfield A.  
 Gwinn, William R.  
 Hadley, Mrs. Edwin M.  
 Haffner, Mrs. Charles C., Jr.  
 Hagen, Mrs. Daise  
 Haight, George I.  
 Hair, T. R.  
 Hajicek, Rudolph F.  
 Haldeman, Walter S.  
 Hale, Mrs. Samuel  
 Hales, William M.  
 Hall, Edward B.  
 Hall, Mrs. J. B.  
 Halligan, W. J.  
 Hellmann, Herman F.  
 Halperin, Aaron  
 Halverstadt, Romaine M.  
 Hamm, Fred B.  
 Hammaker, Paul M.  
 Hammerschmidt, Mrs. George F.  
 Hand, George W.  
 Hanley, Henry L.  
 Hann, J. Roberts  
 Hansen, Mrs. Carl  
 Hansen, Mrs. Fred A.  
 Hansen, Jacob W.  
 Hanson, Mrs. Norman R.  
 Harder, John H.  
 Harders, Mrs. Flora  
 Rassweiler  
 Harding, John Cowden  
 Harms, Van Deursen  
 Harper, Alfred C.  
 Harrington, David L.  
 Harris, Mrs. Abraham  
 Harris, David J.  
 Harris, Gordon L.  
 Harris, Stanley G.  
 Hart, Max A.  
 Hart, William M.  
 Hartmann, A. O.  
 Hartz, W. Homer  
 Harvey, Byron, III  
 Harvey, Richard M.  
 Harwood, Thomas W.  
 Hass, G. C.  
 Hay, Mrs. William Sherman  
 Hayakawa, Dr. S. I.  
 Hayes, Charles M.  
 Hayes, Harold C.  
 Hayes, Miss Mary E.  
 Haynie, Miss Rachel W.  
 Hays, Mrs. Arthur A.  
 Hayslett, Arthur J.  
 Hazlett, Dr. William H.  
 Hazlett, Mrs. William H.  
 Healy, Vincent Jerrems  
 Heaney, Dr. N. Sproat  
 Hearst, Mrs. Jack W.  
 Heaton, Harry E.  
 Heaton, Herman C.  
 Heffernan, Miss Lili  
 Hefner, Adam  
 Heide, Mrs. Bernard H.  
 Heiman, Marcus  
 Heinzelman, Karl  
 Heinzen, Mrs. Carl  
 Heisler, Francis  
 Hejna, Joseph F.  
 Heldmaier, Miss Marie  
 Helfrich, J. Howard  
 Heller, Albert  
 Heller, John A.  
 Heller, Mrs. Walter E.  
 Hellman, George A.  
 Hellyer, Walter  
 Hemple, Miss Anne C.  
 Henderson, Kenneth M.  
 Henkel, Frederick W.  
 Henley, Dr. Eugene H.  
 Hennings, Mrs. Abraham J.  
 Henschel, Edmund C.  
 Herbst, LeRoy B.  
 Herron, James C.  
 Herron, Mrs. Oliver L.  
 Hertz, Mrs. Fred  
 Hertzberg, Lawrence  
 Herwig, George  
 Herwig, William D., Jr.  
 Herz, Mrs. Alfred  
 Hesse, E. E.  
 Heverly, Earl L.  
 Hibbard, Mrs. Angus S.  
 Hibbard, Mrs. W. G.  
 Hieber, Master J. Patrick  
 Hildebrand, Dr. Eugene, Jr.  
 Hildebrand, Grant M.  
 Hill, Carlton  
 Hill, Mrs. Russell D.  
 Hille, Dr. Hermann  
 Hillebrecht, Herbert E.  
 Hind, Mrs. John Dwight  
 Hinman, Mrs. Estelle S.  
 Hinrichs, Henry, Jr.  
 Hintz, Mrs. Aurelia Bertol  
 Histed, J. Roland  
 Hixon, Mrs. Frank P.  
 Hodgkinson, Mrs. W. R.  
 Hodgson, Mrs. G. C.  
 Hoefman, Harold L.  
 Hoffman, Miss Elizabeth  
 Hoffmann, Edward  
 Hempstead  
 Hogan, Robert E.  
 Hokin, Mrs. Barney E.  
 Holabird, W. S., Jr.  
 Holden, Edward A.  
 Hollander, Mrs. Samuel  
 Holleb, A. Paul  
 Hollenbach, Louis  
 Holliday, W. J.  
 Hollis, Henry L.  
 Holloway, J. L.  
 Holmberg, Mrs. Adrian O.  
 Holmblad, Dr. Edward C.  
 Holmburger, Max  
 Holmes, Miss Harriet F.  
 Holmes, J. A.  
 Holmes, Mrs. Maud G.  
 Holmes, William  
 Holmes, William N.  
 Holt, Miss Ellen  
 Holt, McPherson  
 Holub, Anthony S.  
 Holzheimer, Carl  
 Hoover, Mrs. Fred W.  
 Hoover, H. Earl  
 Hoover, Ray P.  
 Hope, Alfred S.  
 Hopkins, Albert L.



# ASSOCIATE MEMBERS (continued)

- Hopkins, Mrs. James M.  
Hopkins, Mrs.  
    James M., Jr.  
Horcher, William W.  
Horne, Mrs. William  
    Dodge, Jr.  
Horner, Mrs.  
    Maurice L., Jr.  
Hornung, Joseph J.  
Horton, Mrs. Helen  
Horton, Horace B.  
Horween, Arnold  
Horween, Isidore  
Hosbein, Louis H.  
Hough, Frank G.  
Hovland, Mrs. John P.  
Howard, Willis G.  
Howe, Charles Albee  
Howe, Clinton W.  
Howe, Ralph B.  
Howe, Roger F.  
Howes, Mrs. Frank W.  
Howie, Mrs. James E.  
Howse, Richard G.  
Howson, Louis R.  
Hoyne, Miss Susan D.  
Hoyt, Mrs. Phelps B.  
Hraback, L. W.  
Hrdlicka, Mrs. John D.  
Hubbard, George W.  
Huber, Dr. Harry Lee  
Hudson, Miss  
    Katherine J.  
Hudson, Walter L.  
Huey, Mrs. A. S.  
Hufty, Mrs. F. P.  
Huggins, Dr. Ben H.  
Huggins, G. A.  
Hughes, John E.  
Hume, James P.  
Humphrey, H. K.  
Huncke, Herbert S.  
Huncke, Oswald W.  
Hunding, B. N.  
Hunt, George L.  
Hurd, Ferris E.  
Huska, Mrs. Joseph  
Hust, George  
Huszagh, Ralph D.  
Hutchinson, Foye P.  
Hutchinson, Samuel S.  
Hyatt, R. C.
- Ickes, Raymond W.  
Idelman, Bernard  
Igo, Michael L.  
Ilg, Robert A.  
Illich, George M., Jr.  
Ingalls, Allin K.  
Ingersoll, Mrs. S. L.  
Inlander, N. Newton  
Inlander, Samuel
- Irons, Dr. Ernest E.  
Isaacs, Charles W., Jr.  
Isham, Henry P.  
Ives, Clifford E.
- Jackson, Allan  
Jackson, Archer L.  
Jackson, Mrs. Arthur S.  
Jackson, Mrs. W. A.  
Jacobi, Miss Emily C.  
Jacobs, Julius  
Jacobs, Mrs. Walter H.  
Jacobson, Raphael  
James, Walter C.  
Jameson, Clarence W  
Jancosek, Thomas A.  
Janson, Dr. C. Helge M.  
Janusch, Fred W.  
Jarchow, Mrs. C. E.  
Jarchow, Charles C.  
Jarrow, Harry W.  
Jeffreys, Mrs. Mary M.  
Jeffries, Dr. Daniel W.  
Jenkinson, Mrs. Arthur  
    Gilbert  
Jerger, Wilbur Joseph  
Jetzinger, David  
Jirgal, John  
Jirka, Dr. Frank J.  
John, Dr. Findley D.  
Johnson, Dr. Adelaide  
Johnson, Alvin O.  
Johnson, Calmer L.  
Johnson, Mrs. Harley  
    Alden  
Johnson, Joseph M.  
Johnson, Mrs. O. W.  
Johnson, Olaf B.  
Johnson, P. Sveinbjorn  
Johnson, Philip C.  
Johnston, Edward R.  
Johnston, Miss Fannie S.  
Johnston, Mrs. Hubert  
    McBean  
Johnston, Mrs. M. L.  
Jolly, Miss Eva Josephine  
Jonak, Frank J.  
Jones, Mrs. C. A.  
Jones, Gordon M.  
Jones, J. Morris  
Jones, James B.  
Jones, Dr. Margaret M.  
Jones, Melvin  
Jones, Otis L.  
Jones, Miss Susan E.  
Joseph, Mrs. Jacob G.  
Joseph, Louis L.  
Joy, Guy A.  
Judson, Clay  
Juergens, H. Paul  
Julien, Victor R.
- Kahn, Mrs. Arthur S.  
Kahn, J. Kesner  
Kahn, Jerome J.  
Kahn, Mrs. Lillian F.  
Kahn, Louis  
Kaine, James B.  
Kamins, Dr. Maclyn M.  
Kane, Jerome M.  
Kanter, Jerome J.  
Kaplan, Morris I.  
Kasch, Frederick M.  
Katz, Mrs. Sidney L.  
Katz, Solomon  
Katzenstein, Mrs.  
    George P.  
Katzin, Frank  
Kauffman, Mrs. R. K.  
Kauffmann, Alfred  
Kaplan, Morris I.  
Kaufmann, Dr.  
    Gustav L.  
Kavanagh, Clarence H.  
Kay, Mrs. Marie E.  
Keach, Benjamin  
Kehl, Robert Joseph  
Kehoe, Mrs. High Boles  
Keith, Stanley  
Keith, Mrs. Stanley  
Kelker, Rudolph F., Jr.  
Kelly, Mrs. Haven Core  
Kelly, William J.  
Kemper, Hathaway G.  
Kemper, Miss Hilda M.  
Kempner, Harry B.  
Kempner, Stan  
Kendall, Mrs. Virginia H.  
Kendrick, John F.  
Kennedy, Mrs. E. J.  
Kennedy, Lesley  
Kennelly, Martin H.  
Kenney, Clarence B.  
Kent, Dr. O. B.  
Keogh, Gordon E.  
Kern, Mrs. August  
Kern, H. A.  
Kern, Dr. Nicholas H.  
Kern, Trude  
Kerwin, Edward M.  
Kestnbaum, Meyer  
Kettering, Mrs.  
    Eugene W.  
Kew, Mrs. Stephen M.  
Kidwell, L. B.  
Kiessling, Mrs. Charles S.  
Kile, Miss Jessie J.  
Kimball, William W.  
Kimbark, John R.  
King, Clinton B.  
King, Joseph H.  
Kingman, Mrs. Arthur G.  
Kinsey, Robert S.

# ASSOCIATE MEMBERS (continued)

- Kirkland, Mrs.  
Weymouth  
Kirst, Lyman R.  
Kitchell, Howell W.  
Kitzelman, Otto  
Kleinpell, Dr. Henry H.  
Kleist, Mrs. Harry  
Kleppinger, William H.  
Kleutgen, Dr. Arthur C.  
Klinetop, Mrs. Charles W.  
Knickerbocker, Miss  
Paula  
Knopf, Andrew J.  
Knutson, George H.  
Koch, Mrs. Fred J.  
Koch, Raymond J.  
Koch, Robert J.  
Kochs, August  
Koehnlein, Wilson O.  
Kohler, Eric L.  
Konsberg, Alvin V.  
Kopf, Miss Isabel  
Kopinski, Louis  
Koppenaar, Dr.  
Elizabeth Thompson  
Kornblith, Mrs.  
Howard G.  
Kosobud, William F.  
Kotal, John A.  
Kotin, George N.  
Koucky, Dr. J. D.  
Krafft, Mrs. Walter A.  
Kraft, John H.  
Kraft, Norman  
Kralovec, Emil G.  
Kralovec, Mrs. Otto J.  
Kraus, Peter J.  
Kraus, Samuel B.  
Krautter, L. Martin  
Kresl, Carl  
Kretschmer,  
Herman L., Jr.  
Krez, Leonard O.  
Kridner, E. A.  
Kroehler, Kenneth  
Kropff, C. G.  
Krost, Dr. Gerard N.  
Kuehn, A. L.  
Kuh, Mrs. Edwin J., Jr.  
Kuhn, Frederick T.  
Kuhn, Dr. Hedwig S.  
Kunka, Bernard J.  
Kunstadter, Albert  
Kunstadter, Sigmund W.  
Kurfess, John Fredric  
Kurtz, W. O.  
Kurtzon, Morris  
  
Lacey, Miss Clara R.  
Lafin, Miss June  
Atchison  
Lafin, Louis E., Jr.  
  
Lafin, Mrs. Louis E., Jr.  
Lafin, Louis E., III  
Lafin, Miss Mary  
Josephine  
Laing, Mrs. Milton L.  
Laing, William  
Lambert, C. A.  
Lambrecht, Carl R., Jr.  
Lampert, Wilson W.  
Lanahan, Mrs. M. J.  
Lane, F. Howard  
Lane, Ray E.  
Lang, Edward J.  
Langenbach, Mrs. Alice R.  
Langford, Mrs. Robert E.  
Langhorne, George  
Taylor  
Lanman, E. B.  
Lansinger, Mrs. John M.  
Larimer, Howard S.  
Larsen, Samuel A.  
Larson, Mrs. Sarah G.  
Lassers, Sanford B.  
Latshaw, Dr. Blair S.  
Lautmann, Herbert M.  
Lavers, A. W.  
Lavezzorio, Mrs. J. B.  
Lavezzorio, N. J.  
Lavidge, Arthur W.  
Law, Mrs. Robert O.  
Lawless, Dr. Theodore K.  
Lawson, David A.  
Lax, John Franklin  
Layden, Michael J.  
Lazar, Maurice  
Lazear, George C.  
Leahy, James F.  
Leahy, Thomas F.  
Leavell, James R.  
Le Baron, Miss Edna  
Lebold, Samuel N.  
Lebolt, John Michael  
Lederer, Dr. Francis L.  
Lee, David Arthur  
Lee, Mrs. John H. S.  
Lefens, Miss Katherine J.  
Lefens, Walter C.  
Leichenko, Peter M.  
Leight, Mrs. Albert E.  
Leland, Miss Alice J.  
Leland, Mrs. Rosco G.  
Lennon, George W.  
Lenz, J. Mayo  
Leonard, Arthur T.  
Lerch, William H.  
Leslie, Dr. Eleanor I.  
Leslie, John Woodworth  
Lessman, Gerhard  
Le Tourneau, Mrs.  
Robert  
Leverone, Louis E.  
Levi, Julian H.  
  
Levinson, Mrs. Salmon O.  
Levitan, Benjamin  
Levy, Alexander M.  
Levy, Arthur G.  
Lewy, Dr. Alfred  
L'Hommedieu, Arthur  
Liebman, A. J.  
Lillyblade, Clarence O.  
Linden, John A.  
Lindheimer, B. F.  
Lingle, Bowman C.  
Liss, Samuel  
Little, Mrs. E. H.  
Littler, Harry E., Jr.  
Livingston, Julian M.  
Livingston, Mrs.  
Milton L.  
Llewellyn, Paul  
Lloyd, Glen A.  
Lochman, Philip  
Loeb, Hamilton M.  
Loewenberg, Israel S.  
Loewenberg, M. L.  
Loewenherz, Emanuel  
Loewenstein, Richard M.  
Lewy, Dr. Arthur  
Long, William E.  
Loomis, D. P.  
Loomis, Reamer G.  
Lord, Arthur R.  
Lord, John S.  
Lord, Mrs. Russell  
Loucks, Charles O.  
Louer, Albert E. M.  
Louis, Mrs. John J.  
Love, Chase W.  
Lovgren, Carl  
Lowell, Arthur J.  
Lucey, Patrick J.  
Ludolph, Wilbur M.  
Lueder, Arthur C.  
Lunding, Franklin J.  
Luria, Herbert A.  
Lusk, R. R.  
Lustgarten, Samuel  
Lydon, Robert R.  
Lyford, Harry B.  
Lynch, J. W.  
Lyon, Charles H.  
  
Mabee, Mrs. Melbourne  
MacDonald, E. K.  
MacIntyre, Mrs. M. K.  
MacKenzie, William J.  
Mackey, Frank J.  
Mackinson, Dr. John C.  
MacLellan, K. F.  
MacMullen, Dr. Della M.  
MacMurray, Mrs.  
Donald  
Madlener, Mrs.  
Albert F., Jr.

# ASSOCIATE MEMBERS (continued)

- Madlener, Otto  
 Madrin, Mrs. Charles  
 Maehler, Edgar E.  
 Magan, Miss Jane A.  
 Magerstadt, Madeline  
 Magill, John R.  
 Magnus, Albert, Jr.  
 Magnuson, Mrs. Paul  
 Maher, Mrs. D. W.  
 Main, Walter D.  
 Majors, Mrs. B. S.  
 Maling, Albert  
 Malone, William H.  
 Manasse, De Witt J.  
 Manaster, Harry  
 Mandel, Mrs. Aaron W.  
 Mandel, Edwin F.  
 Mandel, Miss Florence  
 Mandel, Mrs. Robert  
 Manegold, Mrs. Frank W.  
 Manierre, Francis E.  
 Manierre, Louis  
 Manley, John A.  
 Manz, Mrs. Carolyn D.  
 Maremont, Arnold H.  
 Mark, Mrs. Cyrus  
 Mark, Griffith  
 Marquart, Arthur A.  
 Marsh, A. Fletcher  
 Marsh, Mrs. John P.  
 Marsh, Mrs. Marshall S.  
 Marsh, Peter John  
 Marston, Mrs. Thomas B.  
 Martin, Mrs. George B.  
 Martin, George F.  
 Martin, Samuel H.  
 Martin, Wells  
 Martin, Mrs. William P.  
 Marx, Adolf  
 Marx, Frederick Z.  
 Marzluff, Frank W.  
 Marzola, Leo A.  
 Mason, Willard J.  
 Masse, B. A.  
 Massey, Peter J.  
 Masterson, Peter  
 Mathesius, Mrs. Walther  
 Matson, J. Edward  
 Matter, Mrs. John  
 Maurer, Dr. Siegfried  
 Maxant, Basil  
 Maxwell, Lloyd R.  
 Mayer, Frank D.  
 Mayer, Herman J., Jr.  
 Mayer, Isaac H.  
 Mayer, Leo  
 Mayer, Oscar F.  
 Mayer, Oscar G.  
 Mayer, Theodore S.  
 Mazurek, Miss Olive  
 McAloon, Owen J.  
 McAlvin, Mrs. James H.  
 McArthur, Billings M.  
 McCahey, James R.  
 McCarthy, Joseph W.  
 McCausland, Mrs.  
 Clara L.  
 McClun, John M.  
 McCord, Downer  
 McCormick, Mrs.  
 Chauncey  
 McCormick, Fowler  
 McCormick, Howard H.  
 McCormick, Leander J.  
 McCormick,  
 Robert H., Jr.  
 McCrea, Mrs. W. S.  
 McCready, Mrs. E. W.  
 McCreight, Louis Ralph  
 McCutcheon, Mrs.  
 John T.  
 McDonald, E. F., Jr.  
 McDonald, Lewis  
 McDougal, David B.  
 McDougal, Mrs. James B.  
 McDougal, Mrs. Robert  
 McErlean, Charles V.  
 McGraw, Max  
 McGurn, Matthew S.  
 McIntosh, Arthur T.  
 McIntosh, Mrs.  
 Walter G.  
 McKenna, Dr. Charles H.  
 McKinney, Mrs. Hayes  
 McLennan, Donald R., Jr.  
 McLennan, Mrs.  
 Donald R., Sr.  
 McLennan, William L.  
 McMenemy, Logan T.  
 McMillan, James G.  
 McMillan, John  
 McMillan, W. B.  
 McNamara, Louis G.  
 McNamee, Peter F.  
 McNulty, Joseph D.  
 McQuarrie, Mrs. Fannie  
 McReynolds, Mrs.  
 Ruth M.  
 McVoy, John M.  
 Mead, Dr. Henry C. A.  
 Medsker, Dr. Ora L.  
 Melcher, George Clinch  
 Melnick, Leopold B.  
 Merrell, John H.  
 Merriam, Miss Eleanor  
 Merrill, Miss Marion E.  
 Merrill, William W.  
 Metz, Dr. Arthur R.  
 Meyer, Mrs. A. H.  
 Meyer, Abraham W.  
 Meyer, Dr. Charles A.  
 Meyer, Charles Z.  
 Meyerhoff, A. E.  
 Meyers, Erwin A.  
 Meyers, Jonas  
 Michaels, Everett B.  
 Michel, Dr. William J.  
 Midowicz, C. E.  
 Mielenz, Robert K.  
 Milburn, Miss Anne L.  
 Milhening, Frank  
 Miller, Miss Bertie E.  
 Miller, Mrs. Clayton W.  
 Miller, Mrs. Donald J.  
 Miller, Mrs. F. H.  
 Miller, Mrs. George  
 Miller, Hyman  
 Miller, John S.  
 Miller, Mrs. Olive  
 Beaupre  
 Miller, Oren Elmer  
 Miller, Oscar C.  
 Miller, Mrs. Phillip  
 Miller, R. T., Jr.  
 Mills, Allen G.  
 Mills, Lloyd Langdon  
 Miner, Dr. Carl S.  
 Minturn, Benjamin E.  
 Mitchell, John J.  
 Mitchell, Leeds  
 Mitchell, Oliver  
 Mock, Dr. Harry Edgar  
 Moderwell, Charles M.  
 Moist, Mrs. Samuel E.  
 Mojonnier, Timothy  
 Mollan, Mrs. Ferne T.  
 Molloy, David J.  
 Mong, Mrs. C. R.  
 Monheimer, Henry I.  
 Moore, Chester G.  
 Moore, Paul  
 Moore, Philip Wyatt  
 Moran, Miss Margaret  
 Morey, Dr. Charles W.  
 Morf, F. William  
 Morrison, Mrs. Harry  
 Morrison, James C.  
 Morrow, Mrs. John, Jr.  
 Morse, Mrs. Charles J.  
 Morse, Leland R.  
 Morse, Mrs. Milton M.  
 Morse, Robert H.  
 Morton, Sterling  
 Moses, Howard A.  
 Moss, Jerome A.  
 Mossman, John E.  
 Mouat, Andrew J.  
 Moxon, Dr. George W.  
 Moyer, Mrs. Paul S.  
 Mudge, Mrs. John B.  
 Muehlstein, Mrs. Charles  
 Mueller, Austin M.  
 Mueller, Miss Hedwig H.  
 Mueller, J. Herbert  
 Mueller, Paul H.  
 Mulhern, Edward F.

# ASSOCIATE MEMBERS (continued)

- Munroe, Moray  
 Murphy, Joseph D.  
 Murphy, O. R.  
 Murphy, Robert E.  
 Muszynski, John J.  
 Myrland, Arthur L.  
  
 Naber, Henry G.  
 Naess, Sigurd E.  
 Nagel, Mrs. Frank E.  
 Nance, Willis D.  
 Naumann, Miss Susan  
 Nebel, Herman C.  
 Neely, Mrs. Lloyd F.  
 Nehls, Arthur L.  
 Nellegar, Mrs. Jay C.  
 Nelson, Arthur W.  
 Nelson, Charles G.  
 Nelson, Donald M.  
 Nelson, Victor W.  
 Neuman, Sidney  
 Neumann, Arthur E.  
 Newberger, Joseph  
     Michael  
 Newhall, R. Frank  
 Newhouse, Karl H.  
 Newman, Mrs. Albert A.  
 Newman, Charles H.  
 Nichols, Frank Billings  
 Nichols, J. C.  
 Nilsson, Mrs.  
     Goodwin M.  
 Nishkian, Mrs.  
     Vaughn G.  
 Nitze, Mrs. William A.  
 Noble, Samuel R.  
 Noonan, Edward J.  
 Norman, Harold W.  
 Norris, Mrs. Lester  
 Norton, Christopher D.  
 Novak, Charles J.  
 Noyes, A. H.  
 Noyes, Allan S.  
 Noyes, Mrs. May Wells  
 Nufer, Gene  
 Nusbaum, Mrs.  
     Hermien D.  
 Nyman, Dr. John Egbert  
  
 Oberfelder, Herbert M.  
 Oberfelder, Walter S.  
 Obermaier, John A.  
 O'Brien, Miss Janet  
 O'Connell, Edmund  
     Daniel  
 Odell, William R., Jr.  
 Offield, James R.  
 Oglesbee, Nathan H.  
 O'Keefe, Mrs. Dennis D.  
 O'Keefe, William F.  
 Olaison, Miss Eleanor O.  
 Oldberg, Dr. Eric  
  
 Oldefest, Edward G.  
 Oleson, Wrisley B.  
 Olin, Carl E.  
 Oliver, Mrs. Paul  
 Olsen, Miss Agnes J.  
 Olsen, Mrs. Arthur O.  
 Olson, Gustaf  
 Olson, Rudolph J.  
 O'Neil, Dr. Owen  
 Onofrio, Mrs. Michael J.  
 Ooms, Casper William  
 Opeka, Frank M.  
 Oppenheimer, Mrs.  
     Harry D.  
 Orndoff, Dr. Benjamin H.  
 O'Rourke, Albert  
 Orr, Mrs. Robert C.  
 Orr, Thomas C.  
 Orthal, A. J.  
 Ortmyer, Dr. Marie  
 Osborn, Theodore L.  
 Oser, Nelson A.  
 Ostrom, Mrs. J. Augustus  
 Otis, J. Sanford  
 Otis, Joseph E.  
 Otis, Joseph Edward, Jr.  
 Otis, Stuart Huntington  
 Owens, Harry J.  
  
 Paasche, Jens A.  
 Packard, Dr. Rollo K.  
 Paepcke, Walter P.  
 Page, John W.  
 Pallasch, Dr. Gervaise P.  
 Palm, Felix  
 Palmer, James L.  
 Palmgren, Mrs.  
     Charles A.  
 Pandaleon, Costa A.  
 Pardee, Harvey S.  
 Pardridge, Mrs. E. W.  
 Park, R. E.  
 Parker, Norman S.  
 Parker, Troy L.  
 Parks, C. R.  
 Parmelee, Dr. A. H.  
 Parry, Mrs. Norman G.  
 Partridge, Lloyd C.  
 Paschen, Mrs. Henry  
 Pashkow, A. D.  
 Patterson, Grier D.  
 Patzelt, Miss Janet  
 Peabody, Howard B.  
 Peabody, Miss Susan W.  
 Pearl, Allen S.  
 Pearse, Langdon  
 Pearson, George  
     Albert, Jr.  
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 Peirce, Albert E.  
 Pencik, Jan M.  
 PenDell, Charles W.  
  
 Percy, Dr. Mortimer  
     Nelson  
 Perel, Harry Z.  
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 Perlman, Daniel  
 Perry, Mrs. I. Newton  
 Peter, William F.  
 Peters, Harry A.  
 Petersen, Elmer M.  
 Petersen, Jurgen  
 Peterson, Axel A.  
 Peterson, Mrs. Bertha I.  
 Peterson, Mrs.  
     Richard E.  
 Pfealzer, Miss  
     Elizabeth W.  
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 Phillips, Dr. Herbert  
     Morrow  
 Phillips, Mervyn C.  
 Phoenix, George E.  
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 Pierce, J. Norman  
 Pierce, Paul, Jr.  
 Pierson, Joseph B.  
 Pink, Mrs. Ira M.  
 Pirie, Mrs. John T.  
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 Platt, Edward Vilas  
 Platt, Mrs. Robert S.  
 Plummer, Comer  
 Pobliske, Albert C.  
 Podell, Mrs. Beatrice  
     Hayes  
 Polk, Mrs. Stella F.  
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 Poole, Mrs. Marie R.  
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 Pope, John W.  
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 Porter, Charles H.  
 Porter, Edward C.  
 Porter, Mrs. Frank S.  
 Porter, Henry H.  
 Porter, Louis  
 Porter, Mrs. Sidney S.  
 Post, Mrs. Philip Sidney  
 Pottenger, William A.  
 Potts, Albert W.  
 Poulson, Mrs. Clara L.  
 Powills, Michael A.  
 Pratt, Mrs. William E.  
 Pray, Max  
 Prentice, John K.  
 Price, John McC.  
 Primley, Walter S.  
 Prince, Mrs. Arthur C.  
 Prince, Harry  
 Prince, Rev. Herbert W.  
 Prince, Leonard M.



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Pritchard, Richard E.  
 Probst, Marvin G.  
 Proxmire, Dr.

Theodore Stanley  
 Prussing, Mrs. R. E.  
 Pucci, Lawrence  
 Purcell, Joseph D.  
 Purcey, Victor W.  
 Putnam, Miss Mabel C.  
 Puttkammer, E. W.  
 Pyterek, Rev. Peter H.

Quick, Miss Hattiemae

Raber, Franklin  
 Racheff, Ivan  
 Radford, Mrs. W. A., Jr.  
 Radniecki, Rev. Stanley  
 Raff, Mrs. Arthur  
 Raftree, Miss Julia M.  
 Railton, Miss Frances  
 Ramis, Leon Lipman  
 Randall, Rev. Edwin J.  
 Randall, Irving  
 Raney, Mrs. R. J.  
 Rankin, Miss Jessie H.  
 Rassweiler, August  
 Rathje, Frank C.  
 Ratner, Walter B.  
 Ray, Harold R.  
 Raymond, Dr. Albert L.  
 Raymond, Mrs.

Howard D.  
 Razim, A. J.  
 Reach, Benjamin F.  
 Reals, Miss Lucile  
 Farnsworth, Jr.  
 Redfield, William M.  
 Redington, F. B.  
 Reed, Mrs. Frank D.  
 Reed, Mrs. Lila H.  
 Reed, Norris H.  
 Reed, Mrs. Philip L.  
 Regan, Mrs. Robert G.  
 Regenstein, Joseph  
 Regnery, Frederick L.  
 Reid, Mrs. Bryan  
 Reilly, Vincent P.  
 Reingold, J. J.  
 Remy, Mrs. William  
 Renaldi, George J.  
 Renshaw, Mrs. Charles  
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 Re Qua, Haven A.  
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 G. William  
 Reynolds, Harold F.  
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 Rice, Laurence A.

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 Richards, Mrs. Bartlett  
 Richards, Donald  
 Richards, Marcus D.  
 Richardson, George A.  
 Richardson, Guy A.  
 Richter, Mrs. Adelyn W.  
 Ridgeway, Ernest  
 Rieser, Leonard M.  
 Rietz, Elmer W.  
 Rietz, Walter H.  
 Ripstra, J. Henri  
 Ritchie, Mrs. John  
 Rittenhouse, Charles J.  
 Roberts, Mrs. John  
 Roberts, John M.  
 Roberts, Shepherd M.  
 Roberts, William  
 Munsell  
 Robertson, Hugh  
 Robinson, Sanger P.  
 Robinson,  
 Theodore W., Jr.  
 Roderick, Solomon P.  
 Rodgers, Dr. David C.  
 Rodman, Thomas  
 Clifford  
 Rodman, Mrs. Hugh  
 Roehling, Mrs. Otto G.  
 Roehm, George R.  
 Rogers, Miss Annie T.  
 Roggenkamp, John  
 Rogovsky, W. P.  
 Rolnick, Dr. Harry C.  
 Romer, Miss Dagmar E.  
 Root, John W.  
 Rosborough, Dr. Paul A.  
 Rosen, M. R.  
 Rosenbaum, Mrs.  
 Edwin S.  
 Rosenbaum, Mrs.  
 Harold A.  
 Rosenfeld, M. J.  
 Rosenstone, Nathan  
 Rosenstone, Samuel  
 Rosenthal, Kurt  
 Rosenthal, Samuel R.  
 Rosenwald, Richard M.  
 Ross, Joseph F.  
 Ross, Robert C.  
 Ross, Mrs. Robert E.  
 Ross, Thompson  
 Ross, Walter S.  
 Roth, Aaron  
 Roth, Mrs. Margit  
 Hochsinger  
 Rothacker, Watterson R.  
 Rothschild, George  
 William  
 Routh, George E., Jr.  
 Rozelle, Mrs. Emma

Rubens, Mrs. Charles  
 Rubloff, Arthur  
 Rubovits, Theodore  
 Ruettinger, John W.  
 Runnells, Mrs. Clive  
 Rupperecht, Mrs.  
 Edgar P.  
 Rushton, Joseph A.  
 Rutledge, George E.  
 Ryan, Mrs. William A.  
 Ryerson, Mrs.  
 Donald M.

Sackley, Mrs. James A.  
 Sage, W. Otis  
 Salmon, Mrs. E. D.  
 Sammons, Wheeler  
 Sample, John Glen  
 Sampsell, Marshall G.  
 Sandidge, Miss Daisy  
 Sands, Mrs. Frances B.  
 Santini, Mrs. Randolph  
 Sargent, Chester F.  
 Sargent, Ralph  
 Sauter, Fred J.  
 Sawyer, Ainslie Y.  
 Sawyer, Dr. Alvah L.  
 Schact, John H.  
 Schaefer, Fred A.  
 Schafer, Mrs. Elmer J.  
 Schafer, O. J.  
 Schaffner, Mrs. Joseph  
 Schaffner, Mrs. L. L.  
 Scharin, Mrs. J. Hippach  
 Scheiner, Miss Clara A.  
 Scheinman, Jesse D.  
 Schenck, Frederick  
 Schlichting, Justus L.  
 Schmidt, Dr. Charles L.  
 Schmidt, Mrs. Minna M.  
 Schmitz, Dr. Henry  
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 Schneider, F. P.  
 Schnering, Robert B.  
 Schnur, Ruth A.  
 Scholl, Dr. William M.  
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 Charles W.  
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 Schueren, Arnold C.  
 Schukraft, William  
 Schulze, Mrs. Mathilde  
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 Schurig, Robert Roy  
 Schutz, Thomas A.  
 Schuyler, Mrs.  
 Daniel J.  
 Schwab, Laurence E.  
 Schwander, J. J.  
 Schwandt, Miss Erna  
 Schwanke, Arthur  
 Schwartz, Charles K.



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Schwartz, Dr. Otto  
Schwarz, Herbert E.  
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Scott, Willis H.  
Scribner, Gilbert  
Searle, Daniel C.  
Searle, William L.  
Sears, Miss Dorothy  
Sears, J. Alden  
Seaton, G. Leland  
Seaverns, Louis C.  
Sedgwick, C. Galen  
See, Dr. Agnes Chester  
Seeberger, Miss Dora A.  
Seeburg, Justus P.  
Segal, Victor  
Seifert, Mrs. Walter J.  
Seip, Emil G.  
Seipp, Clarence T.  
Seipp, Edwin A., Jr.  
Seipp, William C.  
Sello, George W.  
Sencenbaugh, Mrs. C. W.  
Senne, John A.  
Serota, Dr. H. M.  
Shaffer, Carroll  
Shakman, James G.  
Shanahan, Mrs. David E.  
Shanesy, Ralph D.  
Shannon, Angus Roy  
Shapiro, Meyer  
Sharpe, N. M.  
Sharrow, H. N.  
Shaw, Alfred P.  
Shaw, Mrs. Arch W.  
Sheldon, James M.  
Shelton, Dr. W. Eugene  
Shepherd, Mrs. Edith P.  
Shepherd, Miss Olive M.  
Sherman, Mrs. W. W.  
Shillestad, John N.  
Shillinglaw, David L.  
Shire, Moses E.  
Shoan, Nels  
Shorey, Clyde E.  
Short, J. R.  
Shroyer, Malcolm E.  
Shumway, Mrs. Edward  
De Witt  
Sidley, William P.  
Sieck, Herbert  
Siegel, David T.  
Siemund, Roy W.  
Silander, A. I.  
Silberman, Charles  
Silberman, David, Jr.  
Silberman, David B.  
Silberman, Hubert S.  
Sills, Clarence W.  
Silverstein, Ramond  
Simond, Robert E.  
Simonds, Dr. James P.  
Simpson, John M.  
Simpson, Lyman M.  
Sincere, Henry B.  
Sinclair, Dr. J. Frank  
Singer, Mrs. Mortimer H.  
Sinsheimer, Allen  
Siragusa, Ross D.  
Sisskind, Louis  
Sittler, Edwin C.  
Skarrn, Kenneth W.  
Skleba, Dr. Leonard F.  
Sleeper, Mrs. Olive C.  
Smith, Clinton F.  
Smith, Harold Byron  
Smith, Mrs. Hermon  
Dunlap  
Smith, J. P.  
Smith, Jens  
Smith, Mrs.  
Katharine Walker  
Smith, Mrs. Kinney  
Smith, Miss Marion D.  
Smith, Paul C.  
Smith, Mrs. Ruth B.  
Smith, Mrs. Theodore  
White  
Smith, W. Lynwood  
Smith, Z. Erol  
Smuk, Dr. J. E.  
Smullan, Alexander  
Snyder, Harry  
Socrates, Nicholas A.  
Sola, Joseph G.  
Solem, Dr. George O.  
Sonnenschein, Hugo  
Soper, Henry M.  
Soper, James P., Jr.  
Sopkin, Mrs. Setia H.  
Speer, Robert J.  
Spencer, Mrs. Egbert H.  
Spencer, John P.  
Spencer, Mrs. William M.  
Sperry, Mrs. Leonard M.  
Spertus, Herman  
Spiegel, Mrs. Arthur H.  
Spiegel, Mrs. Gatzert  
Spiegel, Peter J.  
Spitz, Joel  
Spitz, Leo  
Spooner, Charles W.  
Sporrer, M. J.  
Sprague, Dr. John P.  
Spray, Cranston  
Squires, John G.  
Stacey, Mrs. Thomas I.  
Starbird, Miss Myrtle I.  
Starrels, Joel  
Stebbins, Fred J.  
Steele, Henry B., Jr.  
Steepleton, A. Forrest  
Stein, Mrs. Henry L.  
Stein, Dr. Irving  
Stein, L. Montefiore  
Stein, Sydney, Jr.  
Steinberg, Dr. Milton  
Stenson, Frank R.  
Stephan, Mrs. John  
Stephani, Edward J.  
Stephens, L. L.  
Sterba, Dr. Joseph V.  
Stern, Mrs. Alfred  
Stern, Alfred Whital  
Stern, David B.  
Stern, David B., Jr.  
Stern, Gardner H.  
Stern, Oscar D.  
Stevens, Delmar A.  
Stevens, Elmer T.  
Stevens, Harold L.  
Stevenson, Engval  
Stewart, Miss  
Mercedes Graeme  
Stipp, John E.  
Stirling, Miss Dorothy  
Stockton, Eugene M.  
Stolp, John A.  
Stone, Mrs. Jacob S.  
Stone, Mrs. Theodore  
Stough, Mrs. Jay  
Straus, Henry H.  
Straus, Martin L.  
Straus, Melvin L.  
Strauss, Dr. Alfred A.  
Strauss, Ivan  
Strauss, John L.  
Straw, Mrs. H. Foster  
Strickfaden, Miss  
Alma E.  
Stromberg, Charles J.  
Strong, Edmund H.  
Strong, M. D.  
Strong, Mrs. Walter A.  
Strotz, Harold C.  
Stulik, Dr. Charles  
Sulzberger, Frank L.  
Summer, Mrs. Edward  
Sundin, Ernest G.  
Sutherland, William  
Sutton, Harold I.  
Swain, David F.  
Swanson, Holgar G.  
Swartchild, Edward G.  
Swartchild, William G.  
Swett, Robert Wheeler  
Swift, Mrs. Alden B.  
Swift, Edward F., Jr.  
Swift, Gustavus F., Jr.  
Sykes, Aubrey L.  
Sykes, Mrs. Wilfred  
Tarrant, Mrs. Robert  
Taylor, E. Hall

# ASSOCIATE MEMBERS (continued)

Taylor, Frank F.	Ullmann, Herbert S.	Warfield, Edwin A.
Taylor, Herbert J.	Upham, Mrs. Frederic W.	Warner, Mrs. John Eliot
Taylor, James L.	Uriell, Francis H.	Warren, Allyn D.
Taylor, L. S.	Utter, Mrs. Arthur J.	Warren, Paul G.
Taylor, William G.		Warren, Walter G.
Templeton, Stuart J.	Vacin, Emil F.	Warsh, Leo G.
Templeton, Walter L.	Valentine, Andrew L.	Washburne, Hempstead
Terry, Foss Bell	Valentine, Mrs. May L.	Washington, Laurence W.
Thal, Dr. Paul E.	Valentine, Patrick A.	Wassell, Joseph
Thatcher, Everett A.	Van Artsdale, Mrs.	Watkins, George H.
Thelen, Floyd E.	Flora D.	Watson, William Upton
Theobald, Dr. John J.	Van Cleef, Felix	Watt, Herbert J.
Thomas, Mrs. Florence T.	Van Cleef, Mrs. Noah	Watts, Harry C.
Thomas, Dr. William A.	Van Cleef, Paul	Watzek, J. W., Jr.
Thompson, Arthur H.	Van Dellen, Dr.	Weber, Mrs. William S.
Thompson, Edward F.	Theodore R.	Webster, Arthur L.
Thompson, Ernest H.	Van Deventer,	Webster, Miss Helen R.
Thompson, Floyd E.	Christopher	Webster, Henry A.
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Thompson, John R., Jr.	Van Schaack, R. H., Jr.	Weil, Alfred J.
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Tilden, Louis Edward	Vial, Charles H.	Weisbrod, Benjamin H.
Tilt, Charles A.	Vickery, Miss Mabel S.	Weiss, Mrs. Morton
Tobey, William Robert	Vierling, Mrs. Louis	Weiss, Siegfried
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Torbet, A. W.	Voorhees, Mrs. Condit	Welles, Mrs. Edward
Torosian, Peter G.	Voorhees, H. Belin	Kenneth
Torrence, George P.	Vose, Mrs. Frederic P.	Wells, Arthur H.
Touchstone, John Henry	Voynow, Edward E.	Wells, Miss Cecilia
Towler, Kenneth F.		Wells, Preston A.
Towne, Mrs. John D. C.	Wade, Albert G., II	Wendell, Barrett
Traer, Glenn W.	Wager, William	Wendell, Miss
Trask, Arthur C.	Wagner, Mrs. Frances B.	Josephine A.
Traylor, Mrs.	Wagner, Fritz, Jr.	Wentworth, Edward N.
Melvin, A., Jr.	Wagner, Louis A.	Wentworth, John
Traylor, Mrs.	Wahl, Arnold Spencer	Wentworth, Mrs.
Melvin A., Sr.	Wakerlin, Dr. George E.	Sylvia B.
Treadwell, H. A.	Walgreen, C. R., Jr.	Wentz, Peter L.
Trenkmann, Richard A.	Walgreen, Mrs.	Wertheimer, Joseph
Tripp, Chester D.	Charles R.	Wesley, C. N.
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Trowbridge, Mrs.	Walker, Mrs. Paul	Westerfeld, Simon
A. Buel, Jr.	Walker, Samuel J.	Weymer, Earl M.
Trude, Mrs. Mark W.	Walker, William E.	Wheeler, George A.
True, Charles H.	Waller, Mrs. Edward C.	Wheeler, Leslie M.
Tumpeer, Joseph J.	Wallovick, J. H.	Wheeler, Mrs. Robert C.
Turck, J. A. V.	Walpole, S. J.	White, Mrs. James C.
Turner, G. H.	Walsh, Dr. Eugene L.	White, Joseph J.
Turner, Mrs. Horace E.	Wanner, Arthur L.	White, Richard T.
Tuthill, Gray B.	Ward, Edwin J.	White, Sanford B.
Tyler, Thomas S.	Ward, Mrs. N. C.	White, Selden Freeman
	Wardwell, H. F.	Whiting, Mrs. Adele H.
	Wares, Mrs. Helen Worth	Whiting, Lawrence H.

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Wieland, Mrs.	Wilson, Morris Karl	Charles W.
George C.	Wilson, Mrs.	Wulf, Miss
Wienhoeber, George V.	Robert E.	Marilyn Jean
Wilcox, Robyn	Wilson, William	Wupper, Benjamin F.
Wilder, Harold, Jr.	Winans, Frank F.	
Wilder, Mrs. John E.	Windsor, H. H., Jr.	Yager, Mrs. Vincent
Wilker, Mrs. Milton W.	Winston, Hampden	Yondorf, John David
Wilkey, Fred S.	Winston, James H.	Yondorf, Milton S., Jr.
Wilkinson, Mrs.	Winston, Mrs. James H.	Yorkey, Mrs. Margaret
George L.	Winter, Irving	Young, B. Botsford
Wilkinson, John C.	Wolf, Mrs. Albert H.	Young, E. Frank
Willems, Dr. J. Daniel	Wolf, Walter B.	Young, George W.
Willens, Joseph R.	Wolfe, Lloyd R.	
Willey, Mrs. Charles B.	Wood, Mrs.	Zabel, Max W.
Williams, J. M.	Gertrude D.	Zabel, Mrs. Max W.
Williams, Kenneth	Wood, Mrs. Hettie R.	Zapel, Elmer J.
Williams, Rowland L.	Wood, Kay	Zerler, Charles F.
Williams, W. J.	Wood, Mrs. R. Arthur	Ziebarth, Charles A.
Williamson, George H.	Wood, Robert E.	Zimmerman, Herbert P.
Willis, Paul, Jr.	Wood, Mrs. Rollin D.	Zimmerman, Louis W.
Willis, Thomas H.	Wood, William G.	Zinke, Otto A.
Willner, Benton Jack, Jr.	Woods, Weightstill	Zork, David
Wilms, Hermann P.	Work, Robert	Zurcher, Mrs. Suzette M.
Wilson, Edward Foss		

## DECEASED, 1954

Armbrust, John T.	Hart, Mrs. Herbert L.	Patterson, Mrs. L. B.
Blair, Mrs. M. Barbour	Henry, Huntington B.	Portis, Dr. Sidney A.
Butler, Mrs. Hermon B.	Hershey, J. Clarence	Puckey, F. W.
Cates, Dudley	Homan, Miss Blossom L.	
Clark, Miss Alice Keep	Hurlbut, Miss	Regnery, William H.
Crane, Charles R., II	Elizabeth J.	Rosenfield, Mrs.
	Hurvitz, H. R.	Morris S.
Dahlberg, Bror G.	Johnson, Nels E.	Sargent, John R. W.
Dempster, Mrs.		Schroeder, Dr. George H.
Charles W.	Kovac, Stefan	Sclanders, Mrs.
Doetsch, Miss Anna	Kramer, Leroy	Alexander
Dolese, Mrs. John		Siebel, Mrs. Ewald H.
Eitel, Karl	Lacey, Miss Edith M.	Smith, Samuel K.
Eitel, Max	Lauren, Newton B.	Stanton, Henry T.
Elting, Howard	Le Moon, A. R.	Stearns, Mrs. Richard I.
Flavin, Edwin F.		Steele, W. D.
Garnett, Joseph B.	McBirney, Mrs. Hugh J.	Trees, Merle J.
Gawne, Miss Clara V.	Morrison, Mrs. C. R.	Wheeler, Leo W.
Goldman, Mrs. Louis	Moyer, E. J. T.	Worcester, Mrs.
Goldstine, Dr. Mark T.	Nollau, Miss Emma	Charles H.
	Oates, James F.	Yerkes, Richard W.

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 Fenn, John F.  
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 Flanagan, James F.  
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 Fowle, Frank F., Jr.  
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 Gidwitz, Victor E.  
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 Gluck, Gerson I.  
 Godfrey, Thomas J.  
 Goebel, Louis H.  
 Goessele, John H.  
 Goettsch, Walter J.  
 Goetz, Carl L.  
 Golber, David  
 Goldberg, Bertrand  
 Golden, John H.  
 Goldschmidt, M.  
 Goldsmith, E. G.  
 Goldstandt, Milton A.  
 Goldstein, Mrs.  
     Benjamin F.  
 Golman, Joseph J.  
 Gomberg, Dr. Harry  
 Gonnerman, Mrs.  
     Allan W.  
 Good, Dr. Palmer W.  
 Goodall, John C.  
 Goodbar, Harry L.  
 Goode, Dr. Ralph C.  
 Goodenough, S. W.  
 Goodhart, Mrs. H. J.  
 Gooding, Robert E.  
 Goodman, Benjamin E.  
 Goodrich, Miss Alice  
 Goodrich, Miss Juliet T.  
 Goodson, Orr  
 Gordon, Edward  
 Gordon, Leslie S.  
 Gordon, Milton  
 Gordon, Norman  
  
 Gore, Samuel  
 Gorman, R. A.  
 Gorsline, Frank D.  
 Gossman, James L.  
 Goth, Joseph  
 Gottlieb, Jacob  
 Gourfain, A. S., Jr.  
 Grace, Donald F.  
 Grace, Mrs. Harriet W.  
 Graff, Earl H.  
 Graffis, Herbert  
 Graffis, William  
 Graham, David  
 Grannan, Emmet  
 Grant, Gordon B.  
 Grant, Joseph S.  
 Grant, Louis Z.  
 Grasty, J. S., Jr.  
 Grauer, Milton H.  
 Graw, Harry J.  
 Grawols, G. L.  
 Gray, A. S.  
 Green, Mrs. Dwight H.  
 Greene, Dr. Charles F.  
 Greenwald, Herbert S.  
 Gregory, Dr.  
     Benjamin J.  
 Gregory, James J.  
 Greiner, Otto  
 Griffin, Franklin T.  
 Griffin, Mrs.  
     James A., Jr.  
 Griglik, Casimir  
 Grigsby, William A.  
 Grimes, J. Frank  
 Grimm, Richard H.  
 Groble, Edward B.  
 Grogel, Merrill A.  
 Grohe, Robert F.  
 Grombach, Alfred O.  
 Grosberg, Charles  
 Grosboll, James  
 Grow, Brimson  
 Gruendel, George H.  
 Grunlee, Sigwald, C.  
 Gudeman, Edward, Jr.  
 Guernsey, Mrs. Nellie T.  
 Gumbinger, Miss Dora  
 Gumbrell, Gregory  
 Gurley, F. G.  
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 Gutgsell, Mrs. Emil J.  
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 Guthrie, S. Ashley  
  
 Haag, Miss Janet  
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 Hackett, Thad  
 Haddow, William  
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 Hafner, Andre B.  
 Hagenah, William J., Jr.



# ANNUAL MEMBERS (continued)

Hagerty, Walter H.	Harvey, James D.	Hesse, Dr. Paul G.
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Hahn, Arthur	Hasselbacher, H. H.	Hibben, Joseph W.
Hahn, Bernard J.	Hassell, Warren S.	Hickey, Matthew J., Jr.
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Hale, Edwin A.	Hatfield, W. A.	Highstone, Mrs.
Hale, T. B.	Hathaway, Mrs.	William H.
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Hall, Miss Eliza P.	Hattstaedt, Mrs. John J.	Hill, Mrs. Cyrus G.
Hall, Mrs. Evelyn F.	Haubrich, Harold F.	Hillier, William H.
Hall, Harry	Haugen, Bernhart	Hillmer, Miss Louise
Hall, Marchand B.	Hauger, R. H.	Hilton, Edward L.
Hallberg, Parker	Hauser, William G.	Hilton, Henry Mark
Franklin	Hausler, Mrs. M. G., Jr.	Hindman, Arthur S.
Halle, Mrs. Virginia C.	Havelaar, W. C.	Hindmarch, Alan
Halligan, Robert F.	Haven, T. J., Jr.	Hines, Charles M.
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Hamill, Mrs. Robert W.	Hay, Lawrence J.	Hinman, Sherwood V.
Hamilton, Mrs.	Hayes, Daniel T.	Hinshaw, Joseph H.
Gurdon H.	Hayes, William E.	Hirsch, Edwin W.
Hamilton, Mrs. John	Haynes, Charles Webster	Hirschfeld, Carl
Hamm, George A.	Haynes, Frank M.	Hirsh, Herbert W.
Hammurabi, F. H.	Haynes, L. S.	Hirshfield, Dr. Hyman J.
Hampson, Philip	Haynie, R. G.	Hirstenstein, Robert E.
Handtmann, G. E.	Haywood, Mrs.	Hitchings, LeRoy K.
Handy, Ellsworth A.	Marshall L., Jr.	Hix, Miss Elsie
Hanna, John C.	Hazel, B. F.	Hixson, Hebron
Hanna, Ralph A.	Hazel, Dr. George R.	Hoban, Dr. Eugene T.
Hansen, Donald W.	Hazen, Theodore D.	Hobbs, Charles H.
Hanson, Mrs. George	Healy, Thomas H.	Hobbs, Mrs. J. P.
Hardin, George D.	Heaney, Mrs. Floy	Hobbs, Russell D.
Harding, Carroll Rede	Hearst, Joseph	Hobscheid, Fred J.
Harding, Frank W.	Heath, George A.	Hochberg, Dr. Paul
Harding, William H.	Heath, Robert L.	Hochfeldt, William F.
Hardwicke, Harry	Hecht, Kenneth G.	Hochschulz, Alfred
Hardy, Charles L.	Hecht, Myron A.	Hoddinott, B. J.
Hardy, Julian H.	Heckel, Edmund P.	Hodges, F. Robert
Hardy, Mrs. L. Martin	Heddens, John W.	Hoehler, Fred K.
Hargrave, Homer P.	Hedges, Dr. Robert N.	Hoffmann, Clarence
Hargreaves, Thomas H.	Hedly, Arthur H.	Hoffmann, Miss Ruth L.
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Harrison, Rodney D.	Henner, Dr. Robert	Holland, Cyrus E.
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Hart, James A.	Herbert, W. T.	Hollander, Jack
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Harvey, Daggett	Herzog, Milan	Hooper, A. F.



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Hooper, Dr. J. Gerald	Isaacs, Roger D.	Julye, John
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Hopper, B. E.	Isett, G. Richard	Kahler, William V.
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Horn, L. H.	Ives, George R.	Kaiser, Miss Minnie B.
Hornburg, Arthur C.	Ives, R. O.	Kaiser, Robert
Horne, Miss Helen D.	Ivry, Lester	Kalwajtys, R. S.
Horowitz, Charles I.		Kamin, William C.
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Horwich, Philip	Jackson, Byrne A.	Kamm, Dr. Bernard A.
Horwitz, Samuel C.	Jackson, Carl W.	Kane, Daniel Francis
Hossack, Arthur L.	Jackson, M. G.	Kane, George H.
Houda, Dr. Leonard J.	Jackson, W. H.	Kane, Mrs. Marion O.
Hough, Charles F.	Jacobs, Nate	Kanter, Dr. Aaron E.
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Houser, T. V.	James, Ralph C.	Karnes, William G.
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Howard, Hubert E.	Javid, Dr. Hushang	Kaufman, Mrs.
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Hughes, Frank W.	John, Rex K., Jr.	Keeton, Dr. Robert W.
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Hull, Lathrop W.	Johnson, Miss Agnes E.	Keister, G. E.
Hulson, J. W.	Johnson, Bert	Keith, Elbridge
Humphreys, Mrs.	Johnson, Miss	Kelce, T. L.
Robert E.	Donna Lee	Kelemen, Rudolph
Hungerford, Becher W.	Johnson, Earl	Keller, Harry F.
Hunker, Robert W.	Johnson, Edmund G.	Keller, M. J.
Hunnemann, Miss	Johnson, Edward F.	Keller, Paul J.
Alma M.	Johnson, Harry G.	Keller, Sidney M.
Hunt, Mrs. William O.	Johnson, Herbert M.	Kelley, Alfred J.
Hunter, J. N.	Johnson, Hjalmar W.	Kellogg, Harry E.
Hurley, G. B.	Johnson, Miss Millie C.	Kellogg, James G.
Hurley, Raymond J.	Johnson, N. Howard	Kellogg, John Payne
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Hutchinson, John H.	Johnson, R. C.	Kelly, Clyde
Huth, Frank D.	Johnston, A. J.	Kelly, Mrs. Edward J.
Hyatt, Joseph C.	Johnston, Hulburd	Kelly, Frank S.
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	Johnstone, G. Arthur	Kelly, Mrs. T. L.
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Indelli, William A.	Jones, George W.	Kendall, G. R.
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Ingersoll, Robert S.	Jones, Mrs. Walter Clyde	Kennedy, R. J.
Ingersoll, Roy C.	Joseph, Dr. Paul	Kennedy, Taylor L.
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Irwin, A. J.	Judd, William E.	Kerr, Leslie H.

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Kidwell, James E.	Krag, Franz K.	Lau, Mrs. M. K.
Kilberry, F. H.	Krane, Leonard J.	Laud, Sam
Kiley, Francis T.	Kratsch, Charles	Lavedan, Pierre F.
Kimball, Charles H. G.	Krause, Elmer	Lavezzorio, John M.
Kimball, Kenneth J.	Krause, Miss Pearl	Law, M. A.
Kimball, Paul G.	Krause, Walter C.	Lawton, Robert M.
Kincaid, Dr. Clement J.	Kresge, M. L.	Layfer, Seymour J.
King, Dr. A. Charles	Krimsin, Leonard	Lazar, Charles
King, Mrs. Calvin P.	Krinsley, Lazarus	Leahy, George J.
King, Mrs. Charles G.	Kristof, James H.	Leahy, William H.
King, H. R.	Krtichevsky, Jerome	Leander, Russell J.
King, John D.	Kritzer, Dr. Henry E.	Leavitt, Mrs. Louis
King, Miss Louise A.	Kritzer, Richard W.	Leavitt, Mrs. Nathan
King, Lynwood B., Jr.	Kroll, Harry	Lechler, E. Fred
King, Willard L.	Kropp, Raymond	Ledbetter, James L.
King, William H., Jr.	Krugger, Arthur	Lederer, Irving G.
Kingham, J. J.	Krumdieck, Leo	Lederer, Joseph M.
Kipnis, Daniel D.	Krupnick, Samson	Lee, Miss Alice Stephana
Kipnis, Samuel W.	Kuehn, Miss Katherine	Lee, Edward N.
Kirby, Dr. William	Kuhn, Mrs. Joseph	Lee, John H.
Kirchheimer, Thomas	Kuhnen, C. W.	Lee, Joseph R.
Kirkland, William S.	Kuhnen, Mrs. George H.	Lee, Dr. Robert E.
Kittle, Mrs. C. M.	Kuhns, Mrs. H. B.	Leeb, Mrs. H. A.
Klapman, Philip A.	Kulikowski, A. H.	Leeds, David L.
Klein, Mrs. A. S.	Kurtz, William O., Jr.	Leffler, F. O.
Klein, Dr. David	Kurzdorfer, E. T.	Lehman, John L.
Klein, Dr. Ernest L.	Kuta, A. E.	Lehman, Lloyd W.
Klemperer, Leo A.	Kutchins, Edmund	Lehr, Arthur
Klikun, Z. P.		Leighton, Alexander
Kling, Leopold	Lachman, Harold	Leighton, George N.
Klutznick, Mrs.	Lagerholm,	Leindecker, Charles L.
Philip M.	Ferdinand W.	Leiner, John G.
Kneip, Elmer W.	Laidley, Roy R.	Leith, John A.
Knell, Boyd	Laird, Miss Jane	Leland, Samuel
Knight, Dr. Alva A.	Laird, Robert S.	Lello, Herbert F.
Knight, Howard	Lamb, George N.	Lentine, James
Knourek, William M.	Lambe, Claude M., Jr.	Lesch, Mrs. Isabel
Knowlson, J. S.	Lambertsen, John G.	Catharine
Knowlton, John M.	Lance, O. C.	Lesch, John F.
Knuepfer, C. A.	Lane, George A.	Leslie, Orrin S.
Knutson, A. C.	Lang, Eugene C.	Levi, Stanley B.
Koch, Carl	Lang, Gordon	Levin, Louis
Koenig, O. N.	Langan, Harley B.	Levin, Robert E.
Kohn, Edward	Lange, A. G.	Levine, William
Kohn, Henry L.	Lange, Hugo C.	Levine, William D.
Kohn, Louis	Langer, Joseph S.	Levitan, Moses
Kolbe, Frank F.	Langford, Joseph P.	Levitt, Dr. Judith U.
Kolehmainen, Waino M.	Lansman, H. A.	Levy, Albert H.
Kolflat, Alf	Laramore, Florian E.	Lewendowski,
Kollar, Dr. John A., Jr.	Large, Judson	Sigmund W.
Kolter, Dr. B. C.	Larkin, J. D.	Lewis, Edward J.
Koretz, Edgar E.	Larkin, Mrs. Walter D.	Lewis, Ellis R.
Koretz, Robert J.	Larsen, Roy R.	Lewis, Mrs. Lloyd
Korf, Dr. Stanley R.	Larson, Simon P.	Lewis, Mrs. Walker O.
Korshak, Marshall	La Salle, Miss Janet A.	Lickfield, Rev. F. W.
Kos, Victor A.	Lasch, Charles F.	Liebenow, J. Gus
Kosmach, Frank P.	Lasch, Harry	Lifvendahl, Dr.
Kostrzewski, Dr. M. J.	Lash, Dr. A. F.	Richard A.
Kotas, Rudolph J.	Laterza, Michael F.	Lilien, Mrs. K. K.

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- Lill, George, II  
 Limarzi, Dr. Louis R.  
 Lindberg, Donald F.  
 Lindell, Arthur G.  
 Lindeman, John H.  
 Lindley, Walter C., Jr.  
 Lindsay, Mrs. Martin  
 Linn, Howard  
 Linthicum, J. Francis  
 Lippincott, R. R.  
 Lippman, Mrs. William  
 Lipsey, Howard  
 Lipshutz, Joseph  
 Lissner, Herbert H.  
 List, Stuart  
 Liston, Thomas P.  
 Litschgi, Dr. J. J.  
 Litten, Chapin  
 Little, Wilson V.  
 Littman, Benson  
 Lizzardo, Joseph F.  
 Lloyd, Miss Georgia  
 Lock, Gilbert L.  
 Locke, Edwin A., Jr.  
 Lockwood, Lawrence A.  
 Lockwood, Maurice H.  
 Lockwood, Mrs.  
     Maurice H.  
 Loeb, Herbert A., Jr.  
 Loebe, Edward E.  
 Loewenstein, Mrs.  
     Sidney  
 Logelin, Edward C.  
 Long, H. Dale  
 Long, R. E.  
 Loomis, Miss Marie  
 Looney, Charles C.  
 Loosli, Dr. Clayton G.  
 Lorraine, Mrs. Luther M.  
 Lorber, Herbert J.  
 Lorentz, Arthur G.  
 Loughead, Miss Ruth  
 Loung, George, Jr.  
 Love, H. Norris  
 Love, John T.  
 Lovejoy, Mrs. Winfred L.  
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 Lowy, Walter H.  
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 Lubig, Max  
 Ludgin, Earle  
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     Frederick Orr  
 Ludolph, Arthur L.  
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 Lundy, Francis L.  
 Luotto, Stefano  
 Lurie, George S.  
 Lurie, Max  
 Lurie, S. C.  
 Luse, Mrs. D. Claude  
 Lydon, Eugene K.  
 Lynch, M. F.  
 Lynch, William J., Jr.  
 Lynch, Miss Zoe D.  
 Lynn, Mrs. Robert H.  
 Lyon, Mrs. Jeneva A.  
 MacChesney, Chester M.  
 MacCowan, Hervey L.  
 MacDonald, H. E.  
 MacFarland, Hays  
 MacFarland, Lanning  
 Macholz, Rev. Ignatius  
 Mack, John J.  
 Mackaye, M. R.  
 MacKenzie, William J.  
 Macki, Gunnar C.  
 MacKiewich, Justin  
 MacLean, Mrs.  
     John A., Jr.  
 MacNamee, Merrill W.  
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 Madden, John  
 Maddock, Thomas E.  
 Maddock, Mrs. Walter G.  
 Magee, M. L.  
 Magid, Cecil E.  
 Magill, Miss Hallie  
 Magnuson, Paul B., Jr.  
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 Mahler, I. H.  
 Maison, Mrs. L. G.  
 Majka, F. L.  
 Major, Frank A.  
 Major, Ross O.  
 Makler, Joseph H.  
 Malcolmson, R. F.  
 Mall, Arthur W.  
 Mallegg, O. O.  
 Maloney, David B.  
 Mann, Dr. Charles  
     Milton  
 Mann, Earle A.  
 Mannelle, Mrs.  
     Russell L.  
 Manning, Mrs.  
     Herbert S.  
 Manning, Dr. Paul D. V.  
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     Paul D. V.  
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 Marchant, Miss Lilian  
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 Marker, Van E.  
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 Marks, Frank O.  
 Markus, Alfred S.  
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     Franklin, Jr.  
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     Gilbert H.  
 Marquart, Arthur A.  
 Marron, Dr. James W.  
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 Marshall, Benjamin H.  
 Marshall, Charles A.  
 Marsteller, William A.  
 Marston, T. E.  
 Martin, Cecil  
 Martin, Donald B.  
 Martin, Eldon  
 Martins, P. A.  
 Marx, Samuel A.  
 Mason, Arnold D. K.  
 Mason, J. A.  
 Mast, Leland J.  
 Mastri, Dr. Aquil  
 Masur, Dr. Walter W.  
 Matchett, Hugh M.  
 Mathews, M. M.  
 Mathewson, Lynn L.  
 Mathias, Paul E.  
 Mathieu, Auguste  
 Mathis, Allen W.  
 Matson, H. M.  
 Matthews, Francis E.  
 Matthews, J. H.  
 Matthews, Miss Laura S.  
 Matz, Edward D.  
 Maxon, R. C.  
 Maxwell, Robert E.  
 May, Sol  
 Mayer, Frederick  
 Mayer, Robert B.  
 Maynard, John G.  
 McArthur, A. Peter N.  
 McArthur, Mrs. S. W.  
 McAuliffe, J. D.  
 McBride, W. Paul  
 McCaffrey, J. L.  
 McCall, Dr. I. R.  
 McCallister, James  
     Maurice  
 McCann, Charles J.  
 McCarthy, Mrs.  
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 McClellan, John H.  
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 McConnell, Thomas C.  
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 McCoy, E. R.

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McDonald, John M.	Mertz, Miss Henriette	Moran, Dr. Edward L.
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McDougal, C. Bouton	Meyer, Albert F.	Morgan, Miss
McDougal, Mrs.	Meyer, Mrs. Clara K.	Elizabeth W.
Edward D., Jr.	Meyer, Dr. Karl A.	Morgan, Fred C.
McDougal, Robert, Jr.	Meyer, Stanton M.	Morgan, Dr. Freda
McDougall, Dugald S.	Meyer, Wallace	Morgan, Russell W.
McDougall, Mrs.	Michaels, F. W.	Morgan, Samuel
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McEldowney, C. R.	Michels, Mrs. George W.	Morris, Michael
McEwen, C. Logan	Middleton, J. A.	Morris, Milton H.
McGaffigan, Paul K.	Milbrook, A. T.	Morris, Sidney L.
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McGuire, Martin J.	Millard, A. E.	Moss, Jerry
McGuire, Simms D.	Millard, Mrs. E. L.	Mottier, C. H.
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George D.	Miller, John W.	Mullaney, Roger
McLaughlin, L. B.	Miller, Leo A.	Mullen, J. Bernard
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Vincent	Miller, R. W.	Mullenix, Robert W.
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McManus, J. L.	Miller, William H.	Mulligan, Joseph B.
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McNair, F. Chaloner	William W.	Wilbur C.
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McNamara,	Milliken, John F.	Murphy, Charles F.
Donald McC.	Mills, Walter B.	Murphy, J. P.
McNamara, Harley V.	Minkler, Ralph R.	Murray, Edwin A.
McNamara, Robert C.	Mirabella, Mrs. S. F.	Murray, William M.
McPheron, Eugene R.	Mitchell, Harry G.	Musick, Philip Lee
McSurely, Mrs.	Mitchell, Maurice B.	Muzzy, H. Earle
William H.	Mizen, Dr. Michael R.	Myer, Dr. Ernest
McVey, Dr. Emerson K.	Moll, Edwin	
Meers, Henry W.	Mollendorf, J. D.	Nachman, H. S.
Megan, Graydon	Molter, Harold	Nafziger, R. L.
Mehan, J. H.	Monsen, Myron T.	Nahmens, Paul M.
Meidell, Harold	Montgomery, A. E.	Narowetz, Louis L.
Meine, Franklin J.	Montgomery, P. B.	Nash, Gordon B.
Meisner, John C.	Montgomery, S. A.	Nash, R. D.
Melcarek, Dr. T. A.	Mont Pas, W. F.	Nath, Bernard
Melgaard, B. B.	Moore, Donald F.	Nathan, Joseph
Mellinghausen, Parker	Moore, Edward F.	Nathan, Kenneth S.
Mellody, Mrs.	Moore, Harold A.	Natkin, Sidney J.
Andrew R.	Moore, Dr. Josiah J.	Naven, Benjamin S.
Mellody, Miss Margaret	Moore, Kenneth W.	Neff, Ward A.



# ANNUAL MEMBERS (continued)

- Nell, Edward J.  
 Nelson, Charles M.  
 Nelson, Mrs. Edwin W.  
 Nelson, Mrs. Henri E.  
 Nemeroff, Maurice  
 Nemeyer, S. Lloyd  
 Ness, J. Stanley  
 Newberger, Arnold  
 Newburg, C. Frank  
 Newcomer, Mrs. Paul  
 Newman, Charles H.  
 Newman, Mrs. Jacob  
 Newman, Ralph G.  
 Newton, C. G.  
 Newton, Dr. Roy C.  
 Nice, Dr. Leonard B.  
 Nicholson, Dr. F. M.  
 Nickel, Walter J.  
 Nickell, H. K.  
 Nielsen, George  
 Nielsen, Marc T.  
 Nikopoulos, George A.  
 Nisen, Charles M.  
 Noble, Daniel E.  
 Noble, Guy L.  
 Norberg, Stanley R.  
 Nord, Henry J.  
 Nordberg, C. A.  
 Norell, Elmer G.  
 Norman, Gustave  
 Norris, Mrs. James  
 Norris, Ross A.  
 North, Mrs. F. S.  
 North, Harold F.  
 Northrup, Lorry R.  
 Norton, Charles E.  
 Norton, Michael J.  
 Nugent, Dr. Oscar B.  
 Nutting, Harold J.  
 Nygren, Henry C.  
  
 Oates, James F., Jr.  
 Oberfelder, Joseph H.  
 Oberhelman, Dr.  
     Harry A.  
 O'Brien, Donald J.  
 O'Brien, L. R.  
 O'Brien, M. J.  
 O'Brien, Martin T.  
 O'Brien, Vincent  
 O'Brien, Wilbur J.  
 O'Brien, William L.  
 Ochsner, Dr. Edward H.  
 O'Connor, John B.  
 O'Connor, John J.  
 Oechslin, Ernest, Jr.  
 Offield, Wrigley  
 O'Hair, R. C.  
 O'Haire, Harry J.  
 O'Hara, Arthur J.  
 O'Keefe, John F.  
 O'Leary, Miss Geraldine  
  
 Olin, Edward L.  
 Oliver, Dr. Marguerite  
 Ollendorff, Klaus  
 Olmsted, C. H.  
 Olsen, Clarence  
 Olson, Albert M.  
 Olson, Benjamin Franklin  
 Olson, H. Edsall  
 O'Malley, Patrick L.  
 O'Neill, Dr. Eugene J.  
 O'Neill, J. Vincent  
 Opie, Earle F.  
 Oppenheimer, Seymour  
 Orr, Hunter K.  
 Orschel, A. K.  
 Orstrom, Albert Z.  
 Osanai, Mrs. Mary M.  
 Osborne, W. Irving, Jr.  
 Osgood, Mrs. Gilbert H.  
 Ossendorff, Dr. K. W.  
 O'Sullivan, James J.  
 O'Toole, Bartholomew  
 O'Toole, Donald  
 O'Toole, John J.  
 Otto, Dr. George H.  
 Otto, Walter C.  
 Owen, John E.  
 Owen, Mrs. Ralph W.  
 Owen, S. C.  
  
 Pace, Anderson  
 Pacer, T. S.  
 Padour, Dr. Frank J.  
 Pallasch, Paul V.  
 Papierniak, Dr. Frank B.  
 Parent, Warren K.  
 Parker, E. A.  
 Parker, Miss Edith P.  
 Parker, Lee N.  
 Parry, Mrs. Margaret  
 Paschal, John William  
 Paschen, Herbert C.  
 Pasco, Frank J.  
 Patrick, Harry H.  
 Patterson, W. A.  
 Pattis, S. William  
 Patton, A. E.  
 Patton, Ralph E.  
 Paul, Albert W.  
 Paul, L. O.  
 Pauley, Clarence O.  
 Paulus, Mrs. Max G.  
 Payes, William J., Jr.  
 Payson, Randolph  
 Peabody, Mrs.  
     Stuyvesant  
 Peacher, Mrs. D. J.  
 Peacock, Charles D., III  
 Peake, F. R.  
 Pearce, Charles S.  
 Peck, Miss Constance L.  
 Peck, Nelson C.  
  
 Pederson, Alfred S.  
 Pellow, Ralph  
 Pelnar, L. T.  
 Pelz, William W.  
 Penner, Louis L.  
 Penner, Samuel  
 Pepich, Stephen T.  
 Pergo, Nicholas  
 Perkins, Dr. George L.  
 Perkins, L. B.  
 Pergo, Nicholas  
 Perlman, Alfred H.  
 Perlman, Harold L.  
 Perlman, Raymond L.  
 Perlstein, Mrs. Harris  
 Perreault, Earl E.  
 Perry, Mrs. Joseph Sam  
 Perry, Miss Margaret E.  
 Perry, W. A.  
 Person, Dr. Allgot G.  
 Peskin, Bernard W.  
 Petacque, Max W.  
 Peterkin, Daniel, Jr.  
 Peters, Dr. Albert G.  
 Peters, Russell L.  
 Petersen, Lawrence A.  
 Petersen, Niels  
 Peterson, H. R.  
 Peterson, Harold E.  
 Peterson, Peter G.  
 Pettengell, James T.  
 Pettibone, Holman D.  
 Pettinger, Andrew  
 Pfister, Mrs. C. Eugene  
 Pflager, Charles W.  
 Phelps, Miss Elizabeth  
 Phelps, William Henry  
 Philipsborn, M. M., Jr.  
 Phillips, Miss Ina  
 Picher, William S.  
 Pick, O. M.  
 Piers, Dr. Gerhart  
 Pike, Dr. Wayne S.  
 Pikiel, Mrs. A. J.  
 Pillsbury, Mrs. Charles S.  
 Pilot, Dr. I.  
 Piper, C. A.  
 Pirie, Mrs. Gordon L.  
 Pirofalo, James C.  
 Platt, Henry R., Jr.  
 Platt, Sherwood K.  
 Pletz, S. R.  
 Plummer, Daniel C., Jr.  
 Plunkett, Paul M.  
 Podesta, Robert A.  
 Poe, Miss Frances  
 Poggendorff, Andrew  
 Pollard, Willard L.  
 Pollock, Mrs. Lewis J.  
 Polyak, Dr. Stephen  
 Pond, Mrs. Harold M.  
 Pontius, Mrs. G. V.  
 Pope, George J.



# ANNUAL MEMBERS (continued)

- Pope, Mrs. Henry, Jr.  
Pope, J. W.  
Pope, Sidney T.  
Portis, Henry R.  
Post, Myron H.  
Potter, Charles S.  
Potter, Howard I.  
Potter, Robert E., Jr.  
Potter, Dr. Robert  
Morse  
Powers, Carl J.  
Powers, William F.  
Praeger, Charles H.  
Pratt, Jacob C., Jr.  
Preble, Robert C.  
Preikschat, Raymond W.  
Press, Robert M.  
Presson, Gerald  
Preston, Charles D.  
Price, Frederick J.  
Price, Griswold A.  
Prince, Kenneth C.  
Prince, William Wood  
Prindiville, Frank W.  
Prindiville, James A.  
Pringle, Don  
Prior, Frank O.  
Pritchard, N. H.  
Pritikin, Mrs. Sara Z.  
Pritzker, Mrs. Jack  
Prosser, Mrs. John A.  
Pruitt, Raymond S.  
Puestow, Dr. Charles B.  
Pulham, Herbert J.  
Purdy, J. D.  
Purdy, John P.  
Purdy, William G.  
Purvis, Miss Sadie  
Pushkin, Dr. E. A.  
Putnam, B. H.  
Putterman, A. Jerry  
Puzey, Russell V.
- Querl, E. P.  
Quetsch, L. J.  
Quin, George Robert  
Quisenberry, T. E.
- Raaen, John C.  
Radack, Mrs.  
Dorothy W.  
Rademacher, Miss  
Marge  
Radovich, Miss Bessie  
Rank, Emil T.  
Ranney, George A., Jr.  
Rappold, Samuel R.  
Rasmussen, L. M.  
Rattner, Dr. Herbert  
Raubitschek, Dr.  
Howard A.  
Rawleigh, James N.
- Ray, Mrs. Herbert S.  
Ray, King Peter  
Rayner, Lawrence  
Reace, William T.  
Read, Freeman C.  
Ready, Charles H.  
Rector, William H.  
Redding, George H.  
Reed, Ernest H.  
Reed, Mrs. Frank C.  
Reed, Guy E.  
Reed, L. F. B.  
Reed, Philip G.  
Rees, Lester G.  
Reese, Edward H.  
Reeves, George C.  
Reeves, H. Edward  
Regenstein, Joseph, Jr.  
Regnery, Mrs. Henry  
Reicin, Frank E.  
Reid, Alf F.  
Reilly, G. W.  
Reilly, George A.  
Reilly, W. J.  
Rein, Lester E.  
Reisch, Mrs. Louis J.  
Remien, Miss Marie  
Katherine  
Render, Miss Forsythe  
Renken, Miss Martha  
Renn, Mrs. John A.  
Rentschler, Mrs.  
William H.  
Replogle, Dr. Fred A.  
Resch, Mrs. Robert P.  
Ressler, Harold B.  
Reskin, Charles G.  
Reum, Walter J.  
Rice, Dr. Frank E.  
Rich, Keith  
Richards, Longley  
Richards, Oron E.  
Ridley, Mrs. E. N.  
Riedeman, H. T.  
Riggs, E. R.  
Riggs, Mrs. Joseph A.  
Riley, Edward C.  
Riley, John H.  
Rinaker, Samuel M.  
Rinder, Dr. Carl O.  
Rindfleisch, Keith P.  
Ring, Kenneth C.  
Ring, Leonard M.  
Rink, Dr. Arthur G.  
Rioff, Harry A.  
Ripley, James J.  
Ritsos, Nicholas T.  
Rivera, J. A.  
Rizner, Homer R.  
Roach, O. R.  
Roach, Rollin W.  
Robandt, Al
- Robb, Richard P.  
Robbins, Burr L.  
Robbins, Laurence B.  
Roberts, J. K.  
Robertson, Egbert  
Robertson, Theodore B.  
Roche, Donald M.  
Roche, John Pierre  
Roddewig, Clair M.  
Rodell, Herbert L.  
Roden, Carl B.  
Roderick, Mrs.  
Howard F.  
Rodger, John H.  
Rodriguez, Dr. Arthur A.  
Rodwick, Frank P.  
Roe, Frederick  
Roebuck, A. S.  
Roefler, Henry A.  
Rogers, Alfred M.  
Rogers, Donald D.  
Rogers, Mrs. J. B.  
Rogers, Lester C.  
Rogers, Milton P.  
Rogers, Miss Suzanne  
Rogers, Thomas W.  
Rold, Dr. Dale  
Roman, B. F.  
Romer, Mrs. Arthur C.  
Ronning, Magnus I.  
Roos, Edwin J.  
Rose, Ben  
Rose, Jack  
Rose, Orion L.  
Roseland, J. G.  
Rosenberg, Ben L.  
Rosenberg, Mrs.  
Bernhard  
Rosenberg, Dr. David H.  
Rosenfels, Mrs.  
Irwin S.  
Rosenson, Herzl  
Rosenthal, M. A.  
Rosenwald, Mrs. Milly M.  
Ross, Dr. Chester John  
Ross, Earl  
Ross, Dr. Edward J.  
Ross, Dr. Martin T.  
Roth, Arthur J.  
Roth, Mrs. Donald I.  
Rothschild, Edward  
Rothschild, Martin  
Rowan, Mrs. Paul  
Rowe, F. B.  
Rubert, William F.  
Rubinson, Adolph A.  
Ruby, Norman  
Rudolph, Dr. A. H.  
Ruehlmann, William R.  
Rugen, Fred A.  
Ruhl, Robert H.  
Rumsfeld, Herbert W.

# ANNUAL MEMBERS (continued)

- Runnells, John S.  
 Runzel, William L., Jr.  
 Ruppert, Max K.  
 Rush, Richard B.  
 Ruskin, Mrs. Harry H.  
 Russell, Harold S.  
 Ruth, Miss Thyra J.  
 Rutherford, M. Drexel  
 Ruttenberg, Derald H.  
 Ryser, Frank
- Saalfeld, Harry H.  
 Sack, Don  
 Sackett, DeForest  
 Sackett, Samuel J.  
 Sackheim, Sol  
 Sadauskas, Miss  
     Frances H.  
 Saffir, M. A.  
 Sager, Mrs. S. Norman  
 Saks, Benjamin  
 Salomon, Ira  
 Saltiel, Dr. Thomas P.  
 Salzman, Philip H.  
 Sample, Joseph S.  
 Sampson, H. R.  
 Sampson, Robert L.  
 Samuels, Albert  
 Samuels, Benjamin  
 Samuels, Julius  
 Samuels, Richard L.  
 Samuels, S. J.  
 Samuelson, George  
 Sanborn, Mrs. V. C.  
 Sandberg, John V.  
 Sandro, Edward G.  
 Sanfilippo, John J.  
 San Filippo, Dr. Paul D.  
 Sang, Bernard G.  
 Sang, Philip D.  
 Sanow, Harry R.  
 Sappanos, Michael  
 Sasser, F. H.  
 Sauerman, John A.  
 Saunders, R. S.  
 Savage, Stanley  
 Sawyer, E. D.  
 Sawyer, John H.  
 Sawyier, Calvin P.  
 Sayers, Leon D.  
 Sayre, Dr. Loren D.  
 Scalbom, O. Trumbull  
 Scanlon, Miss Marjorie  
 Scarborough, Mrs. Henry  
 Schaar, B. E.  
 Schaefer, W. A.  
 Schaffer, T. H.  
 Schaffner, Arthur B.  
 Schaffner, Miss Marion  
 Schelter, Charles H.  
 Scheman, Dr. Louis  
 Schiff, Max
- Schiltz, M. A.  
 Schipfer, Dr. L. A.  
 Schlossberg, Mrs. Harry  
 Schlossman, Norman J.  
 Schmidt, Erich F.  
 Schmidt, George A.  
 Schmidt, Mrs.  
     Siegfried G.  
 Schmus, Elmer E.  
 Schneider, Benjamin B.  
 Schneider, Miss Gertrude  
 Schnering, P. B.  
 Schnute, Dr. William J.  
 Schoch, M. G.  
 Schoeneberger, Charles A.  
 Schoettler, F. Girard  
 Schomp, Arthur H.  
 Schooler, Lee  
 Schrade, L. H.  
 Schrader, John P.  
 Schrager, Charles L.  
 Schrey, Dr. Edward L.  
 Schroeder, Werner W.  
 Schuetz, Ralph E.  
 Schultz, Chester H.  
 Schumaker, L. C.  
 Schureman, Jean L.  
 Schuttler, Mrs. Peter  
 Schutz, Reuben M.  
 Schwartz, Joseph H.  
 Schwartz, Leo J.  
 Schwartz, Marc W.  
 Schwartz, Milton H.  
 Schwartz, Nathan H.  
 Schwemm, Earl M.  
 Sciaky, Sam  
 Scofield, Clarence P.  
 Scott, Frederick H.  
 Scott, George A. H.  
 Scott, Mrs. J. Russell  
 Scott, Mrs. Marion R.  
 Scott, William Edouard  
 Scott, Dr. Winfield W.  
 Scrimgeour, Miss  
     Gladys M.  
 Scudder, Mrs.  
     William M.  
 Scully, Charles F.  
 Seaholm, A. T.  
 Seaman, H. Gilbert  
 Seaman, Henry L.  
 Sears, Harry M.  
 Season, R. F.  
 Seaverns, George A., Jr.  
 Secord, Burton F.  
 Seeley, Robert M.  
 Segal, Myron M.  
 Selfridge, Calvin F.  
 Selig, Lester N.  
 Sell, N. J.  
 Sellers, Paul A.  
 Selz, Frank E.
- Sembower, John F.  
 Semrad, Joseph B.  
 Seneat, Dr. F. E.  
 Sergeant, Gordon E.  
 Sethness, C. H., Jr.  
 Severns, Roger L.  
 Sevic, Mrs. William  
 Sewell, Allen K.  
 Sexton, Mrs. Thomas G.  
 Seyfarth, H. E.  
 Shafer, Frederick C.  
 Shafer, Dr. S. J.  
 Shanner, Charles T.  
 Shannon, Charles E.  
 Shannon, Peter M.  
 Shapiro, Henry  
 Sharp, Carl J.  
 Sharpe, Dr. Kenneth P.  
 Shaver, Robert D.  
 Shaw, John I.  
 Shaw, John W.  
 Shaw, Lee C.  
 Sheaff, Dr. Howard M.  
 Shearer, James, II  
 Shedd, Mrs. Charles C.  
 Shedd, Jeffrey  
 Shedd, Mrs. John  
 Sheehan, Thomas J.  
 Sheekman, Harvey Z.  
 Sheldon, Leo C.  
 Sheldon, Walter M., Jr.  
 Shere, Lewis  
 Sherer, Mrs. Albert W.  
 Sheridan, Leo J.  
 Sheridan, Raymond M.  
 Sherman, Robert T.  
 Shetler, Stanley L.  
 Shields, G. A.  
 Shilton, Earle A.  
 Shipley, M. L.  
 Shlaes, Harry L.  
 Shlopach, Wallace B.  
 Short, William H.  
 Shrader, Frank K.  
 Shriver, Millard D.  
 Shuffitowski, Joseph T.  
 Shylin, Robert E.  
 Sibley, Joseph C., Jr.  
 Siebel, George E.  
 Sieber, Paul E.  
 Sirocinski, E. John  
 Silber, Newton E.  
 Sill, Vincent D.  
 Silverstein, Milton  
 Simmon, Dr.  
     Nicholas M.  
 Simmons, George H.  
 Simmons, James R.  
 Simmons, Nicholas L.  
 Simon, Charles H.  
 Simon, John J.  
 Simonson, Burton E.

# ANNUAL MEMBERS (continued)

- Sims, Frank S.  
Sims, Paul K.  
Sims, William W.  
Sinaiko, Dr. Edwin S.  
Singer, William A.  
Siniarski, T. A.  
Sinnerud, Dr. O. P.  
Sipple, Robert G.  
Sittler, Dr. W. Walter  
Sivage, Gerald A.  
Sivyer, Warner  
Sklar, N. Raoul  
Skudera, Mrs. Marie  
Slater, Frederick J.  
Slavik, W. M.  
Slifka, George C.  
Sloan, Dr. Jack H.  
Sloan, Dr. LeRoy H.  
Sloan, Dr. Noah H.  
Sloan, William F.  
Smalley, B. L.  
Smalley, John H.  
Smick, Robert W.  
Smith, Bernard Peacock  
Smith, C. D.  
Smith, Charles L.  
Smith, Charles Lambert  
Smith, Dean C.  
Smith, Dr. Edward C.  
Smith, Edward R.  
Smith, George P. F.  
Smith, H. Kellogg  
Smith, Harold A.  
Smith, John F., Jr.  
Smith, Dr. Louis D.  
Smith, Miss Mary  
    Frances  
Smith, Monroe A.  
Smith, Robert C.  
Smolka, Oscar J.  
Snow, Lendol D.  
Snyder, Bernard  
Snyder, Bernard A.  
Snyder, Richard E.  
Sollitt, Mrs. Ralph T.  
Sollitt, Sumner S.  
Somerville, Robert  
Somerville, Mrs.  
    William  
Sommer, Albert A.  
Sommers, Bert Edward  
Spacek, Leonard P.  
Spatta, George  
Spaulding, J. B.  
Spector, Mrs. Ann  
Speed, Dr. Kellogg  
Speer, Stanton H.  
Spencer, William N.  
Sperry, Oliver R.  
Spiegel, Miss  
    Katherine J.  
Spiegel, Dr. Manuel  
Spitz, Milton J.  
Spitzer, Mrs. Sherman T.  
Spoonier, Dr. Bruce A.  
Springsguth, Robert C.  
Stagman, Dr. Joseph  
Stagman, Nathan  
Stahl, Harold A.  
Stahl, John  
Stair, H. Bowen  
Stanbery, J. N.  
Stang, J. I.  
Stange, Howard W.  
Stanley, Donald  
Stanley, E. V.  
Stannard, F. J.  
Stanton, Edgar, Jr.  
Stanton, Mrs. Francis R.  
Stanton, Lyman A.  
Stark, W. J.  
Starr, Harry  
Starrett, Miss Carolyn J.  
Starshak, A. L.  
Stauffacher, E. L.  
Staunton, E. C.  
Stavish, Emanuel G.  
Stebler, W. J.  
Steding, Richard P.  
Steele, A. L.  
Steele, A. Thomas  
Steen, Enoch  
Steffen, Charles  
Steffey, D. Earl  
Steigmann, Dr.  
    Frederick  
Stein, Karl E.  
Stein, Mrs. S. Sidney  
Steins, Mrs. Halsey  
Steinwedell, William  
Stekly, Harold  
Stensland, T. N.  
Stephan, Edmund A.  
Stern, Herbert L.  
Stern, Herbert L., Jr.  
Sternberg, Edward  
Steuer, Mrs. Joseph True  
Steven, Ian  
Stevens, Mrs. Clement D.  
Stewart, George W.  
Stiegel, S. James  
Stiggleman, James H.  
Stiles, J. F., Jr.  
Stind, C. J.  
Stine, Francis B.  
Stiner, Mrs. Norman J.  
Stivers, Clifford L.  
Stix, Lawrence C., Jr.  
Stockton, Joseph D.  
Stoddard, Robert M.  
Stoffels, Edgar O.  
Stofft, Edmond B.  
Stoker, Mrs. John E.  
Stolz, Leon  
Stone, Dr. F. Lee  
Stone, Mrs. E. J.  
Stone, Herbert Stuart  
Stone, Mrs. J. S.  
Stonehouse, Elmer H.  
Storer, E. W.  
Storey, Oliver W.  
Storey, Smith W.  
Storkan, Mrs. James  
Stormont, Dr. D. L.  
Stout, Frederick E.  
Stout, Harold H.  
Stover, Frank C.  
Straka, Frank B.  
Strassheim, Fred W.  
Stratford, Herbert R.  
Stratton, Paul  
Stratton, Robert C.  
Straus, Mrs. Robert E.  
Strauss, Marshall E.  
Stresenreuter, Mrs.  
    Charles H.  
Strode, Miss Marie  
Strohmeier, Dr. Otto E.  
Stuart, Lyman J.  
Stuart, William M.  
Stuckslayer, Walter N.  
Stuebner, Edwin A.  
Stults, Allen P.  
Stumes, Charles B.  
Sudler, Carroll H., Jr.  
Sullivan, Bolton  
Sullivan, Frank W.  
Sullivan, J. E.  
Sulzberger, Mrs.  
    Frank L.  
Summers, W. L.  
Sustman, R. S.  
Suyker, Hector  
Svensson, Olof  
Swanson, H. G.  
Swanson, K. G.  
Sweet, Mrs. Carroll  
Sweet, Lisle W.  
Swett, Israel  
Swett, Warren C.  
Swibel, Charles R.  
Swift, T. Philip  
Sylvester, Edmund Q.  
Sylvester, Miss Maria P.  
Symonds, Merrill  
Szujewski, Dr. Henry A.  
Szymanski, Dr.  
    Frederick J.  
Talbot, Mrs. Eugene S.  
Tanan, Stanley J.  
Tannenbaum, Dr.  
    Karl H.  
Tanzi, Mario  
Tarnopol, Emil  
Tarr, Lester W.

# ANNUAL MEMBERS (continued)

Tarrson, Albert J.	Trumbull, William M.	Wagner, Mrs. David H.
Tatge, Paul W.	Tucker, Albert B.	Wagner, Richard
Tauber, Stewart	Turner, Dr. Herbert A.	Wahl, Herman L.
Taylor, Mrs. A. Thomas	Turney, Russell J.	Wahl, Orlin I.
Taylor, Edward L.	Tuteur, Charles	Waite, Roy E.
Taylor, Fitzhugh	Tuteur, Irving M.	Waldeck, Herman
Taylor, Orville	Tyrrell, Miss Frances	Waldie, Benjamin D.
Taylor, Mrs. Samuel G.		Waldman, Dr. Albert G.
Teichen, E. H.	Ughetti, John B.	Waldman, S. C.
Temple, John	Uhlmann, Richard F.	Walgren, Lawrence C.
Templeman, J. P.	Ullmann, S. E.	Walker, Dr. Alfred O.
Templeton, Kenneth S.	Ullmann, William E.	Walker, Frank R.
Temps, Leupold	Ultsch, W. Lewis	Walker, Mrs. India A.
Teninga, Alfred J.	Urbain, Jules, Jr.	Walker, Reno R.
Tenney, Henry F.	Urbain, Leon F.	Walker, Wendell
Terker, Sam	Urban, Andrew	Wall, Dr. Frank J.
Terrill, Dean	Urban, Dr. H. J.	Wallenstein, Sidney
Teter, Park	Uretz, Daniel A.	Waller, William, Jr.
Thacker, Francis Edgar	Urlick, Delbert N.	Wallerstein, David B.
Thatcher, Dr. Harold W.	Urnes, Dr. M. P.	Wallgren, Eric M.
Theis, Dr. Frank V.		Walsh, Donald J.
Thiele, George C.	Vail, Mrs. Daniel M.	Walters, Gary G.
Thillens, Melvin	Vail, Donald P.	Waltman, C. E.
Thomas, Mrs. F.	Vail, J. Dean, Jr.	Walz, John W.
Thomas, Miss Martha	Van Buskirk, M. G.	Wanger, David E., Jr.
Thompson, A. M.	Vance, Charles C.	Warady, Dr. Seymore C.
Thompson, H. Hoyt	Vance, S. M.	Wardwell, H. F.
Thompson, Dr. John R.	Vanderkloot, Dr. Albert	Ware, Mrs. Robert R.
Thompson, K. I.	Vander Kloot, Nicholas J.	Ware, Mrs. Thomas M.
Thorek, Dr. Philip	Vander Ploeg, Frank	Ware, Willis C.
Thoren, Mrs. J. N.	Van Deventer, William E.	Warner, Mason
Thoresen, H. B.	Van Dyk, S. A.	Warner, William H.
Thorne, Frank H.	Van Hagen, Miss	Warton, Frank R.
Thorson, Reuben	Elizabeth	Washburn, Dr.
Thrasher, Dr. Irving D.	Van Kampen, A. H.	Kenneth C.
Tiberius, George	Van Nice, Errett	Wasson, Mrs. Isabel B.
Tilden, Merrill W.	Van Santen, James	Wasson, Theron
Tillotson, J. W.	Van Schaick, Mrs.	Waterstreet, W. Neal
Tinsley, Dr. Milton	Ethel R.	Watling, John
Tippens, Mrs. Albert H.	Varty, Leo G.	Watson, John A.
Tipple, F. A.	Vaughan, Alan W.	Watt, Andrew J.
Tonk, Percy A.	Vaughn, Norman	Watt, Howard D.
Tonn, George	Velvel, Charles	Watt, Richard F.
Toomin, Philip R.	Velvel, H. R.	Watts, Amos H.
Topaz, Martin	Verhaag, Dr. Joseph E.	Weathers, Everett A.
Topolinski, J. J.	Vernon, Dr. Leroy N.	Weaver, John M.
Torff, Selwyn H.	Vette, J. L.	Webb, Dr. Edward F.
Towle, Joseph W.	Vick, Maurice B.	Webber, Harold H.
Tracy, Wilfred	Victorine, Vernon E.	Weber, James E.
Trager, D. C.	Vilsoet, William	Webster, Dr. Augusta
Trainor, H. J.	Vogel, James B.	Webster, Frederick F.
Traut, Bernard H.	Vogt, Earle E.	Webster, N. C.
Travelletti, Bruno L.	Voltz, D. H.	Weichselbaum, Dr.
Traver, George W.	Von Gehr, George	Paul K.
Travis, Eugene C.	Von Ohlen, Floyd E.	Weick, George T.
Traynor, William	Voris, Dr. Harold C.	Weidert, William C.
Knowlton	Voytech, Charles F.	Weidler, Donald A.
Treffeisen, Gustave	Vyse, T. A. E.	Weigandt, Sebastian
Tregenza, A. E.		Weigle, Mrs. Maurice
Trimarco, Ralph R.	Wach, Dr. Edward C.	Weil, Mrs. Carl H.
Triner, Joseph	Wachter, Frederick J.	Weiner, Charles
Troeger, Louis P.	Wadler, Miss Maxine	Weinreich, C. F.



# ANNUAL MEMBERS (continued)

Weinress, S. J.	Wieland, John	Woolard, Francis C.
Weisbrod, Maxfield	Wilber, Allen S.	Woolman, John S.
Weiss, Alexander	Wilby, A. C.	Woulfe, Henry F.
Weitman, W. E.	Wild, Lydon	Wright, Dr. F. Howell
Weitzel, Carl J.	Wilder, E. P., Jr.	Wrisley, George A.
Weitzel, Mrs. Tony	Wilds, John L.	Wulf, Miss Lydia
Welch, William E.	Wiles, Bradford	Wyatt, Harry N.
Welfeld, Marvin J.	Wilhite, James A.	Wybel, L. E.
Wells, D. P.	Willard, Nelson W.	
Wells, Sidney	Willett, Howard L., Jr.	Yarnall, Frank H.
Wenholz, Walter W.	Williams, Albert W.	Yates, Gar W.
Wenninger, William C.	Williams, Frederick C.	Yates, John E.
Werrenrath, Reinald, Jr.	Williams, Lawrence	Yates, P. L.
Wesby, Vernon L.	Williams, Robert G.	Yates, Schuyler
Wescott, Dr. Virgil	Willis, George H.	Yavitz, Sidney M.
West, James D.	Willis, Ivan L.	Yehmert, Wallace E.
West, Richard H.	Willott, Mrs. Adele	Yellin, Morris
Westbrook, Charles H.	Willy, Gustave J.	Yeoman, George W.
Wetherell, Warren	Wilmas, W. F.	Yesnick, Dr. Louis
Wetmore, Horace O.	Wilson, Allen B.	Yohe, C. Lloyd
Wetten, Walton	Wilson, Percival C.	Yonkers, Edward H.
Weymouth, Ralph E.	Wiltsee, Herbert	Young, C. S.
Whalen, William J.	Windchy, Mrs.	Young, Dr. Donald R.
Whall, Arthur L.	Frederick O.	Young, J. L.
Wheeler, Mrs. Seymour	Winsberg, Herbert H.	Youngberg, Arthur C.
Whipple, Gaylord C.	Winston, Farwell	Youngren, W. W.
Whipple, Miss	Winterbotham, John R.	
Velma D.	Wiseman, William P.	Zadek, Milton
Whiston, Frank M.	Wisner, C. V., Jr.	Zatz, Sidney R.
Whitaker, R. B.	Wlocholl, Arthur	Zelinko, George J.
White, Marshall	Wojnarowsky, Dr.	Zelinsky, Mrs. S. F.
White, Philip M.	Emilia	Zimmer, Harry L.
Whitelock, John B.	Wolbach, Murray, Jr.	Zimmerman, Austin M.
Whitfield, George B.	Wolf, Albert M.	Zimmerman, Carl
Whitmore, Lyle S.	Wolf, C. W.	Zimmerman, E. W.
Whitney, Mrs. Charles R.	Wolf, Morris E.	Zimmerman, Dr.
Whitney, Lafeton	Wolf, Orrin E.	Harold W.
Whitsell, Dr. F. M.	Wolff, Frank C.	Zimmerman, Preston
Whittaker, Robert B.	Wolff, Oscar M.	Zimmermann, Mrs. P. T.
Wible, R. R.	Wood, Edwin M.	Zipse, Edwin W.
Wickersham, Mrs.	Wood, Truman	Zitzewitz, Arthur F.
Lucille	Wood, William A.	Zitzewitz, Mrs. Elmer K.
Wicks, Dr. Mark	Woodside, John T.	Zitzewitz, Mrs. W. R.
Wicks, Russell M.	Woodson, William T.	

## DECEASED, 1954

Balfanz, Henry W.	Ferguson, J. F.	Kidston, Ross H.
Blumenthal, Barre	Glade, George H., Jr.	King, J. Andrews
Chandler, Dr.	Goder, Joseph	Langert, A. M.
Fremont A.	Gutstadt, Richard E.	Mayer, Edwin W. C.
Citterman, Solomon	Haeger, E. H.	Nelson, Earl W.
Crawford, Adam W.	Hall, Louis W.	Norton, G. A.
Cunningham, Robert M.	Harrington, J. E.	
Davis, Charles S.	Harshaw, Myron	Oppenheimer, Dr. Leo
Douglass, Dr. Thomas C.	Harvey, Byron S.	Philipp, Mrs.
Essley, E. Porter	Homan, Max	Florence M.
Fenyess, Dr. George	Huxley, Henry M.	Proby, Dr. Edmund A.
	Johnson, Julius	



# ANNUAL MEMBERS (*continued*)

Rice, W. W.  
 Ross, Mrs. Sophie S.  
 Stolle, Arthur E.

Suter, Walter Paul  
 Thompson, Dr.  
 Willard O.

Throop, Mrs. George Enos  
 Uttich, A. J.  
 Wickman, C. E.

# Articles of Incorporation

STATE OF ILLINOIS

DEPARTMENT OF STATE

WILLIAM H. HINRICHSEN, *Secretary of State*

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING:

*Whereas*, a Certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the 16th day of September, A.D. 1893, for the organization of the COLUMBIAN MUSEUM OF CHICAGO, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereto attached.

*Now, therefore*, I, William H. Hinrichsen, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said COLUMBIAN MUSEUM OF CHICAGO is a legally organized Corporation under the laws of this State.

*In Testimony Whereof*, I hereto set my hand and cause to be affixed the Great Seal of State. Done at the City of Springfield, this 16th day of September, in the year of our Lord one thousand eight hundred and ninety-three, and of the Independence of the United States the one hundred and eighteenth.

W. H. HINRICHSEN,  
*Secretary of State.*

[SEAL]

TO HON. WILLIAM H. HINRICHSEN,

SECRETARY OF STATE:

SIR:

We, the undersigned citizens of the United States, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and that for the purposes of such organization we hereby state as follows, to-wit:

1. The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

2. The object for which it is formed is for the accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating Art, Archaeology, Science and History.

3. The management of the aforesaid museum shall be vested in a Board of FIFTEEN (15) TRUSTEES, five of whom are to be elected every year.

4. The following named persons are hereby selected as the Trustees for the first year of its corporate existence:

Edward E. Ayer, Charles B. Farwell, George E. Adams, George R. Davis, Charles L. Hutchinson, Daniel H. Burnham, John A. Roche, M. C. Bullock, Emil G. Hirsch, James W. Ellsworth, Allison V. Armour, O. F. Aldis, Edwin Walker, John C. Black and Frank W. Gunsaulus.

5. The location of the Museum is in the City of Chicago, County of Cook, and State of Illinois.

(Signed)

George E. Adams, C. B. Farwell, Sidney C. Eastman, F. W. Putnam, Robert McCurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer

Buckingham, Andrew McNally, Edward E. Ayer, John M. Clark, Herman H. Kohlsaat, George Schneider, Henry H. Getty, William R. Harper, Franklin H. Head, E. G. Keith, J. Irving Pearce, Azel F. Hatch, Henry Wade Rogers, Thomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, James W. Scott, Geo. F. Bissell, John R. Walsh, Chas. Fitzsimmons, John A. Roche, E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole, Joseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Sooy Smith, P. S. Peterson, John C. Black, Jno. J. Mitchell, C. F. Gunther, George R. Davis, Stephen A. Forbes, Robert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis, James W. Ellsworth, William E. Hale, Wm. T. Baker, Martin A. Ryerson, Huntington W. Jackson, N. B. Ream, Norman Williams, Melville E. Stone, Bryan Lathrop, Eliphalet W. Blatchford, Philip D. Armour.

STATE OF ILLINOIS }  
COOK COUNTY } ss.

I, G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby certify that the foregoing petitioners personally appeared before me and acknowledged severally that they signed the foregoing petition as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of September, 1893.

G. R. MITCHELL,

[SEAL]

NOTARY PUBLIC, COOK COUNTY, ILL.

#### CHANGE IN ARTICLE 1

Pursuant to a resolution passed at a meeting of the corporate members held the 25th day of June, 1894, the name of the COLUMBIAN MUSEUM was changed to FIELD COLUMBIAN MUSEUM. A certificate to this effect was filed June 26, 1894, in the office of the Secretary of State for Illinois.

#### CHANGE IN ARTICLE 1

Pursuant to a resolution passed at a meeting of the corporate members held the 8th day of November, 1905, the name of the FIELD COLUMBIAN MUSEUM was changed to FIELD MUSEUM OF NATURAL HISTORY. A certificate to this effect was filed November 10, 1905, in the office of the Secretary of State for Illinois.

#### CHANGE IN ARTICLE 3

Pursuant to a resolution passed at a meeting of the corporate members held the 10th day of May, 1920, the management of FIELD MUSEUM OF NATURAL HISTORY shall be invested in a Board of TWENTY-ONE (21) TRUSTEES, who shall be elected in such manner and for such time and term of office as may be provided for by the By-Laws. A certificate to this effect was filed May 21, 1920, in the office of the Secretary of State for Illinois.

#### CHANGE IN ARTICLE 1

Pursuant to a resolution passed at a meeting of the corporate members held the 15th day of November, 1943, the name of FIELD MUSEUM OF NATURAL HISTORY was changed to CHICAGO NATURAL HISTORY MUSEUM. A certificate to this effect was filed November 23, 1943, in the office of the Secretary of State for Illinois.

# Amended By-Laws

DECEMBER, 1945

## ARTICLE I

### MEMBERS

SECTION 1. Members shall be of twelve classes, Corporate Members, Honorary Members, Patrons, Corresponding Members, Benefactors, Contributors, Life Members, Non-Resident Life Members, Associate Members, Non-Resident Associate Members, Sustaining Members, and Annual Members.

SECTION 2. The Corporate Members shall consist of the persons named in the articles of incorporation, and of such other persons as shall be chosen from time to time by the Board of Trustees at any of its meetings, upon the recommendation of the Executive Committee; provided, that such person named in the articles of incorporation shall, within ninety days from the adoption of these By-Laws, and persons hereafter chosen as Corporate Members shall, within ninety days of their election, pay into the treasury the sum of Twenty Dollars (\$20.00) or more. Corporate Members becoming Life Members, Patrons or Honorary Members shall be exempt from dues. Annual meetings of said Corporate Members shall be held at the same place and on the same day that the annual meeting of the Board of Trustees is held.

SECTION 3. Honorary Members shall be chosen by the Board from among persons who have rendered eminent service to science, and only upon unanimous nomination of the Executive Committee. They shall be exempt from all dues.

SECTION 4. Patrons shall be chosen by the Board upon recommendation of the Executive Committee from among persons who have rendered eminent service to the Museum. They shall be exempt from all dues, and, by virtue of their election as Patrons, shall also be Corporate Members.

SECTION 5. Any person contributing or devising the sum of One Hundred Thousand Dollars (\$100,000.00) in cash, or securities, or property to the funds of the Museum, may be elected a Benefactor of the Museum.

SECTION 6. Corresponding Members shall be chosen by the Board from among scientists or patrons of science residing in foreign countries, who render important service to the Museum. They shall be elected by the Board of Trustees at any of its meetings. They shall be exempt from all dues and shall enjoy all courtesies of the Museum.

SECTION 7. Any person contributing to the Museum One Thousand Dollars (\$1,000.00) or more in cash, securities, or material, may be elected a Contributor of the Museum. Contributors shall be exempt from all dues and shall enjoy all courtesies of the Museum.

SECTION 8. Any person paying into the treasury the sum of Five Hundred Dollars (\$500.00) at any one time, shall, upon the unanimous vote of the Board, become a Life Member. Life Members shall be exempt from all dues, and shall enjoy all the privileges and courtesies of the Museum that are accorded to members of the Board of Trustees. Any person residing fifty miles or more from the city of Chicago, paying into the treasury the sum of One Hundred Dollars (\$100.00) at any one time, shall, upon the unanimous vote of the Board, become a Non-Resident Life Member. Non-Resident Life Members shall be exempt from all dues, and shall enjoy all the privileges and courtesies of the Museum that are accorded to members of the Board of Trustees.

SECTION 9. Any person paying into the treasury of the Museum the sum of One Hundred Dollars (\$100.00) at any one time, shall, upon the vote of the Board,

become an Associate Member. Associate Members shall be exempt from all dues, and shall be entitled to tickets admitting Member and members of family, including non-resident home guests; all publications of the Museum issued during the period of their membership, if so desired; reserved seats for all lectures and entertainments under the auspices of the Museum, provided reservation is requested in advance; and admission of holder of membership and accompanying party to all special exhibits and Museum functions day or evening. Any person residing fifty miles or more from the city of Chicago, paying into the treasury the sum of Fifty Dollars (\$50.00) at any one time, shall, upon the unanimous vote of the Board, become a Non-Resident Associate Member. Non-Resident Associate Members shall be exempt from all dues, and shall enjoy all the privileges and courtesies of the Museum that are accorded to Associate Members.

SECTION 10. Sustaining Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of Twenty-five Dollars (\$25.00), payable within thirty days after notice of election and within thirty days after each recurring annual date. This Sustaining Membership entitles the Member to free admission for the Member and family to the Museum on any day, the Annual Report and such other Museum documents or publications issued during the period of their membership as may be requested in writing. When a Sustaining Member has paid the annual fee of \$25.00 for six years, such Member shall be entitled to become an Associate Member.

SECTION 11. Annual Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of Ten Dollars (\$10.00), payable within thirty days after each recurring annual date. An Annual Membership shall entitle the Member to a card of admission for the Member and family during all hours when the Museum is open to the public, and free admission for the Member and family to all Museum lectures and entertainments. This membership will also entitle the holder to the courtesies of the membership privileges of every museum of note in the United States and Canada, so long as the existing system of co-operative interchange of membership tickets shall be maintained, including tickets for any lectures given under the auspices of any of the museums during a visit to the cities in which the co-operative museums are located.

SECTION 12. All membership fees, excepting Sustaining and Annual, shall hereafter be applied to a permanent Membership Endowment Fund, the interest only of which shall be applied for the use of the Museum as the Board of Trustees may order.

## ARTICLE II

### BOARD OF TRUSTEES

SECTION 1. The Board of Trustees shall consist of twenty-one members. The respective members of the Board now in office, and those who shall hereafter be elected, shall hold office during life. Vacancies occurring in the Board shall be filled at a regular meeting of the Board, upon the nomination of the Executive Committee made at a preceding regular meeting of the Board, by a majority vote of the members of the Board present.

SECTION 2. Regular meetings of the Board shall be held on the third Monday of the month. Special meetings may be called at any time by the President, and shall be called by the Secretary upon the written request of three Trustees. Five Trustees shall constitute a quorum, except for the election of officers or the adoption of the Annual Budget, when seven Trustees shall be required, but meetings may be adjourned by any less number from day to day, or to a day fixed, previous to the next regular meeting.

SECTION 3. Reasonable written notice, designating the time and place of holding meetings, shall be given by the Secretary.

## ARTICLE III

### HONORARY TRUSTEES

SECTION 1. As a mark of respect, and in appreciation of services performed for the Institution, any Trustee who by reason of inability, on account of change



of residence, or for other cause or from indisposition to serve longer in such capacity shall resign his place upon the Board, may be elected, by a majority of those present at any regular meeting of the Board, an Honorary Trustee for life. Such Honorary Trustee will receive notice of all meetings of the Board of Trustees, whether regular or special, and will be expected to be present at all such meetings and participate in the deliberations thereof, but an Honorary Trustee shall not have the right to vote.

## ARTICLE IV

### OFFICERS

SECTION 1. The officers shall be a President, a First Vice-President, a Second Vice-President, a Third Vice-President, a Secretary, an Assistant Secretary and a Treasurer. They shall be chosen by ballot by the Board of Trustees, a majority of those present and voting being necessary to elect. The President, the First Vice-President, the Second Vice-President, and the Third Vice-President shall be chosen from among the members of the Board of Trustees. The meeting for the election of officers shall be held on the third Monday of January of each year, and shall be called the Annual Meeting.

SECTION 2. The officers shall hold office for one year, or until their successors are elected and qualified, but any officer may be removed at any regular meeting of the Board of Trustees by a vote of two-thirds of all the members of the Board. Vacancies in any office may be filled by the Board at any meeting.

SECTION 3. The officers shall perform such duties as ordinarily appertain to their respective offices, and such as shall be prescribed by the By-Laws, or designated from time to time by the Board of Trustees.

## ARTICLE V

### THE TREASURER

SECTION 1. The Treasurer shall be custodian of the funds of the Corporation, except as hereinafter provided. He shall make disbursements only upon warrants, signed by such officer, or officers, or other persons as the Board of Trustees may from time to time designate.

SECTION 2. The securities and muniments of title belonging to the corporation shall be placed in the custody of some Trust Company of Chicago to be designated by the Board of Trustees, which Trust Company shall collect the income and principal of said securities as the same become due, and pay same to the Treasurer, except as hereinafter provided. Said Trust Company shall allow access to and deliver any or all securities or muniments of title to the joint order of the following officers, namely: the President or one of the Vice-Presidents, jointly with the Chairman, or one of the Vice-Chairmen, of the Finance Committee of the Museum. The President or any one of the Vice-Presidents, jointly with either the Chairman or any one of the other members of the Finance Committee, are authorized and empowered (a) to sell, assign and transfer as a whole or in part the securities owned by or registered in the name of the Chicago Natural History Museum, and, for that purpose, to endorse certificates in blank or to a named person, appoint one or more attorneys, and execute such other instruments as may be necessary, and (b) to cause any securities belonging to this Corporation now, or acquired in the future, to be held or registered in the name or names of a nominee or nominees designated by them.

SECTION 3. The Treasurer shall give bond in such amount, and with such sureties as shall be approved by the Board of Trustees.

SECTION 4. The Harris Trust & Savings Bank of Chicago shall be Custodian of "The N. W. Harris Public School Extension of the Chicago Natural History Museum" fund. The bank shall make disbursements only upon warrants drawn by the Director and countersigned by the President. In the absence or inability of the Director, warrants may be signed by the Chairman of the Finance Committee, and in the absence or inability of the President, may be countersigned by one of the Vice-Presidents, or any member of the Finance Committee.

## ARTICLE VI

### THE DIRECTOR

SECTION 1. The Board of Trustees shall elect a Director of the Museum, who shall remain in office until his successor shall be elected. He shall have immediate charge and supervision of the Museum, and shall control the operations of the Institution, subject to the authority of the Board of Trustees and its Committees. The Director shall be the official medium of communication between the Board, or its Committees, and the scientific staff and maintenance force.

SECTION 2. There shall be four scientific Departments of the Museum—Anthropology, Botany, Geology, and Zoology—each under the charge of a Chief Curator, subject to the authority of the Director. The Chief Curators shall be appointed by the Board upon the recommendation of the Director, and shall serve during the pleasure of the Board. Subordinate staff officers in the scientific Departments shall be appointed and removed by the Director upon the recommendation of the Chief Curators of the respective Departments. The Director shall have authority to employ and remove all other employees of the Museum.

SECTION 3. The Director shall make report to the Board at each regular meeting, recounting the operations of the Museum for the previous month. At the Annual Meeting, the Director shall make an Annual Report, reviewing the work for the previous year, which Annual Report shall be published in pamphlet form for the information of the Trustees and Members, and for free distribution in such number as the Board may direct.

## ARTICLE VII

### THE AUDITOR

SECTION 1. The Board shall appoint an Auditor, who shall hold his office during the pleasure of the Board. He shall keep proper books of account, setting forth the financial condition and transactions of the Corporation, and of the Museum, and report thereon at each regular meeting, and at such other times as may be required by the Board. He shall certify to the correctness of all bills rendered for the expenditure of the money of the Corporation.

## ARTICLE VIII

### COMMITTEES

SECTION 1. There shall be five Committees, as follows: Finance, Building, Auditing, Pension, and Executive.

SECTION 2. The Finance Committee shall consist of not less than five or more than seven members, the Auditing and Pension Committees shall each consist of three members, and the Building Committee shall consist of five members. All members of these four Committees shall be elected by ballot by the Board at the Annual Meeting, and shall hold office for one year, and until their successors are elected and qualified. In electing the members of these Committees, the Board shall designate the Chairman and Vice-Chairman by the order in which the members are named in the respective Committee; the first member named shall be Chairman, the second named the Vice-Chairman, and the third named, Second Vice-Chairman, succession to the Chairmanship being in this order in the event of the absence or disability of the Chairman.

SECTION 3. The Executive Committee shall consist of the President of the Board, the Chairman of the Finance Committee, the Chairman of the Building Committee, the Chairman of the Auditing Committee, the Chairman of the Pension Committee, and three other members of the Board to be elected by ballot at the Annual Meeting.

SECTION 4. Four members shall constitute a quorum of the Executive Committee, and in all standing Committees two members shall constitute a quorum. In the event that, owing to the absence or inability of members, a quorum of the regularly elected members cannot be present at any meeting of any Committee, then the Chairman thereof, or his successor, as herein provided, may summon any members of the Board of Trustees to act in place of the absentee.

SECTION 5. The Finance Committee shall have supervision of investing the endowment and other funds of the Corporation, and the care of such real estate as may become its property. It shall have authority to make and alter investments from time to time, reporting its actions to the Board of Trustees. The Finance Committee is fully authorized to cause any funds or investments of the Corporation to be made payable to bearer, and it is further authorized to cause real estate of the Corporation, its funds and investments, to be held or registered in the name of a nominee selected by it.

SECTION 6. The Building Committee shall have supervision of the construction, reconstruction, and extension of any and all buildings used for Museum purposes.

SECTION 7. The Executive Committee shall be called together from time to time as the Chairman may consider necessary, or as he may be requested to do by three members of the Committee, to act upon such matters affecting the administration of the Museum as cannot await consideration at the Regular Monthly Meetings of the Board of Trustees. It shall, before the beginning of each fiscal year, prepare and submit to the Board an itemized Budget, setting forth the probable receipts from all sources for the ensuing year, and make recommendations as to the expenditures which should be made for routine maintenance and fixed charges. Upon the adoption of the Budget by the Board, the expenditures stated are authorized.

SECTION 8. The Auditing Committee shall have supervision over all accounting and bookkeeping, and full control of the financial records. It shall cause the same, once each year, or oftener, to be examined by an expert individual or firm, and shall transmit the report of such expert individual or firm to the Board at the next ensuing regular meeting after such examination shall have taken place.

SECTION 9. The Pension Committee shall determine by such means and processes as shall be established by the Board of Trustees to whom and in what amount the Pension Fund shall be distributed. These determinations or findings shall be subject to the approval of the Board of Trustees.

SECTION 10. The Chairman of each Committee shall report the acts and proceedings thereof at the next ensuing regular meeting of the Board.

SECTION 11. The President shall be ex-officio a member of all Committees and Chairman of the Executive Committee. Vacancies occurring in any Committee may be filled by ballot at any regular meeting of the Board.

## ARTICLE IX

### NOMINATING COMMITTEE

SECTION 1. At the November meeting of the Board each year, a Nominating Committee of three shall be chosen by lot. Said Committee shall make nominations for membership of the Finance Committee, the Building Committee, the Auditing Committee, and the Pension Committee, and for three members of the Executive Committee, from among the Trustees, to be submitted at the ensuing December meeting and voted upon at the following Annual Meeting in January.

## ARTICLE X

SECTION 1. Whenever the word "Museum" is employed in the By-Laws of the Corporation, it shall be taken to mean the building in which the Museum as an Institution is located and operated, the material exhibited, the material in study collections, or in storage, furniture, fixtures, cases, tools, records, books, and all appurtenances of the Institution and the workings, researches, installations, expenditures, field work, laboratories, library, publications, lecture courses, and all scientific and maintenance activities.

SECTION 2. The By-Laws, and likewise the Articles of Incorporation, may be amended at any regular meeting of the Board of Trustees by a vote in favor thereof of not less than two-thirds of all the members present, provided the amendment shall have been proposed at a preceding regular meeting.



























UNIVERSITY OF ILLINOIS-URBANA



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